ECONOMIC AND POLITICAL WEEKLY

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EVIEW OF AGRICULTURE

- TOWARDS FOOD AND NUTRITION SECURITY
- A POLICY SYSTEM FOR FOOD SECURITY
- SOME EXPERIMENTS WITH FOOD STAMPS
- FERTILISER USE AND EFFICIENCY IN INDIAN AGRICULTURE
- MODERNITY AND ETHNICITY: A HISTORY FOR THE PRESENT
- WOMEN AND PANCHAYATI RAJ
- MATHEMATISATION OF HUMAN SCIENCES
- KARNATAKA: MAKING WAY FOR CORPORATE LANDLORDISM
- METROPOLITAN HEGEMONY IN MINING IN TIRUVITAMKUR, 1900-50

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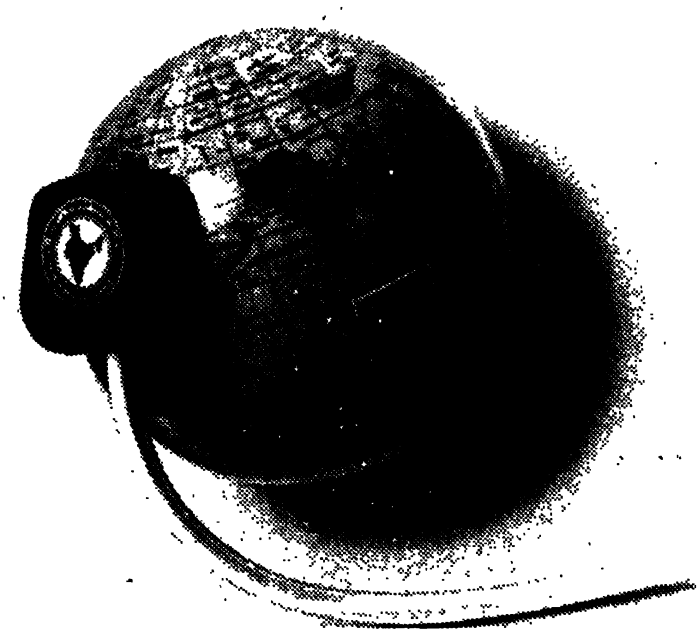

New India has remained a truly multinational insurance company since inception

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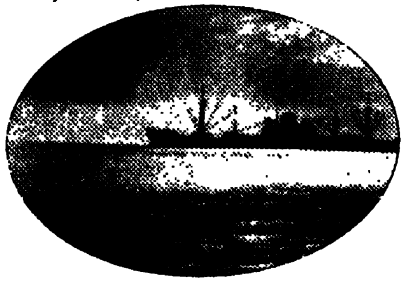

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CONTOUR-NIA-2199

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Founder-Editor: Sachin Chaudhuri

REVIEW OF AGRICULTURE

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Hitkari House
284 Shahid Bhagatsingh Road, Bombay 400 001
Phones 269 6072/73 FAX: (022) 269 6072
EMail: epwl@shakti.ncst.ernet.in
epw@inbb.gn.apc.org
Editor Krishna Raj
Senior Assistant Editor Padma Prakash
Assistant Editor Mahesh Gavaskar
Editorial Staff Cleatus Antony, Prabha Pillai
Gautam Navlakha (Delhi)
Circulation A S Shetty, B S Sharma
Advertisement Managers
M K Ansari, Kamal Amalsad
Manager K Vijayakumar
EPW RESEARCH FOUNDATION
C 212, Akurli Industrial Estate, Kandivli (East)
Bombay 400 101 Phones 887 3038/3041
FAX: (022) 887 3038

Food Securi

The food security systems in place in India need to be reviewed and the existing policy instruments targeted more effectively on the vulnerable sections of the population — but with a more general policy stance of maintaining food security as one of the objectives of the country's agricultural policy and integrating rural employment policies with this objective. A-142

While the challenges involved in ensuring food and nutrition security relate to both the production and distribution of food, inequitable distribution rather than inadequate production is the major factor underlying mass malnutrition. The inequality cannot be corrected by exercises in tokenism and populist 'give away' programmes but only by creating and supporting income generating skills among the poor. A-134

A number of countries have experimented with food stamps programmes as an important means of providing safety-nets to the poor without the social and economic costs associated with public distribution of foodgrains. A review of the experience of Sri Lanka, Jamaica and Zambia. A-151

Captains of the Sand

The predominant mining activity in Kerala in the first half of the 20th century related to mineral beach sands containing monazite, ilmenite and other 'rare earths'. The mineral belt was located in the princely state of Travancore and industry and trade in minerals was under the control of metropolitan capital. A study of the nature and working of the metropolitan hegemony in mining in the region. 3365

Modernity and Ethnicity

By attempting to understand ethnic conflict in India through a grid that has liberalism and fascism locked into an unremitting binary opposition, as though they belong to entirely different histories, we shortchange ourselves. Rather than forcing a choice between secularism and religion, we need to examine the links between ethnic conflicts and the modern governing practices that the British introduced into India as the historical bearers of 'Enlightenment rationalism'. 3373

Fertiliser Use Efficiency

The continuous decline in fertiliser response through the 1980s has been attributed to over-concentration of fertilisers in the agriculturally advanced regions. A study of fertiliser responses under field conditions, however, suggests that the culprit is in fact low fertiliser application combined with low-to-very-low use efficiency in the less developed regions. A-160

Media Behemoths

The foundations of international capitalism are being reshaped at a phenomenal pace with the drive for bigger and bigger mega deals. The US communications industry provides the most striking illustration of the breath-taking pace of concentration. 3352

Women and Panchayats

If reservations for women in panchayats are to lead to their empowerment in real terms, social, economic and political conditions which facilitate and encourage their participation need to be created. 3346

Mathematisation

The human sciences' borrowing of the methodologies of the physical sciences is very much akin to a ritual act and may be said to constitute a process of 'sanskritisation'. 3357

Limited Options

With the BJP's rightist agenda appropriating centrist policies, the only option left for Mulayam Singh Yadav in UP to combat the BJP is to initiate a leftward shift of his party. 3338

Multiple Patriarchies

Multiple yet overlapping patriarchies should underpin new common laws that take into account existing axes of social differentiation even as they transcend such differences in the realm of rights, establishing inalienable rights of all women. 3381

Corporate Landlordism

The Karnataka government's new agricultural policy and the amendments to the land reforms act pave the way for depeasantisation and corporate landlordism. 3340

Road Closed

A TELLING example of how piecemeal solutions and sectional interests defeat the very purpose of planning has been recently provided in Bombay. As is well known, some 5 million people travel every day in Bombay, going southwards where their places of work are mainly located from the northern suburbs where most of them live. The same people travel in the reverse direction in the evening. New skyscrapers and new offices keep coming up in south Bombay even now, with the result that the number of commuters keeps increasing day by day.

This has increased the burden on the two arterial suburban railway lines enormously. Both are working to near-capacity and their service to commuters cannot be improved much by the traditional methods. The city bus service has also reached near-saturation. A bus journey from Dadar to Flora Fountain, which used to take about 25 minutes in the 1950s takes at least twice as much time today. Additional buses will simply clog the roads further, unless the roads system can be strengthend.

Given this situation, one would think that every available road and rail corridor in the island of Bombay will be pressed into service. But this is not the case. The island city possesses a wide, well-preserved road running north-south for about 10 kms. It is not used even to 10 per cent of its capacity. It runs on land managed by the Bombay Port Trust, a public body itself, and the BPT allows use of the road only to parties of its choice, primarily those having dealings in the port area. The road was recently used to transport delegates to the BJP's national conference, which helped avoid traffic jams on the three days of the conference.

Proposals to open this road permanently for public use have been in the air for many years. But the suggestion was once again turned down recently by the chairman of the Bombay Port Trust on the ground that the resulting slowing down of movement of traffic near the port area will reduce the port's activities drastically – maybe by as much as 75 per cent.

It is remarkable that the Port Trust authorities should be worried about reduction of their workload when, by all accounts, the port is overburdened with work and ships have to weigh anchor in the open sea and wait for days before they can berth. The Nhava-Sheva Port was built across the harbour precisely to reduce the load on the Bombay port. Many years after its completion it is still underutilised. We thus have a bizarre situation when a port (at Nhava-Sheva) and a road in the docks area of Bombay city are grossly underutilised. Public is put to untold hardship because of insufficient roads, but the situation is allowed to fester because no one seems to be able to ensure the optimal utilisation of the available resources.

The country has a Planning Commission for the entire country, Maharashtra has a Planning Board at the state level. There is also a metropolitan planning body for Bombay city as well as the newly-constituted development boards for various regions of the state. Even with this kind of multi-layered planning expertise available, no one seems to be able to ensure the utilisation of a vital north-south road in Bombay for the benefit of the city's five million commuters. The same is the case with the Port Trust railway line which is also grossly underutilised for similar reasons. What is worse, none of these planning worthies lose sleep over such issues. The change of government in Maharashtra also has made no difference to the plight of the city-dwellers, though the situation teeters at a flash-point as shown by the numerous riots of suburban railway commuters over minor issues in recent months.

A READER

Bombay

Exaggerated FDI

THIS refers to Sudip Chaudhuri's 'Govern ment and Transnationals: New Economi Policies since 1991' (May 6-13, pp 999 1011). Data on gross inflow of recent foreign direct investment (FDI) on p 1003 (the firs para of Section IV) are misleading. Gros inflows of FDI (approved) for 1994 ar given as Rs 141.9 billion. Reference to th *EPW* Research Foundation presentation o the data (March 11, 1995, p 475) show that Rs 52.3 billion of this amount come from 22 GDR proposals. Although th latter is from the primary market and may partly at least, be used for physical capita formation, it cannot constitute FDI in th sense of foreign investment to acquir management control of the corporation i India. These GDRs confer on the foreign citizens, as owners or their agents as holders non-controlling positions in Indian equity Hence, foreign money inflows from GDR issues should rightly be classified as par of foreign portfolio investment (FPI).

The point I am making should not be construed as a contention with Chaudhur but with the data emanating from the fast-track Foreign Investmnet Promotion Board (FIPB). The government, it seems, is quite desperate to show huge increases in inflows of FDI approved as a vindication of its neo-liberal economic agenda.

BERNARD D'MELLO

Gurgaon

December 30, 1995 ECONOMIC AND POLITICAL WEEKLY

Whistling in the Dark

GOING by the trends in external debt, the country's balance of payments position has the appearance of being relatively comfortable. According to the government's recent White Paper, the debt-GDP ratio has come down from 41.1 per cent in 1989-90 to 34.2 per cent in 1994-95, the share of short-term debt in the total has fallen from 10.2 per cent in March 1991 to 4.3 per cent at the end of the last financial year and the debt-service ratio has fallen from 30.9 per cent to 26.7 per cent over the same period. Further, though the stock of external debt increased by about $ 6.4 billion between March 1994 and March 1995, actual debt creating inflows in 1994-95 were only $ 787 million. The rest of the $ 5.6 billion increase in debt during this period was due to the depreciation of the dollar against the other currencies in which part of India's external debt is denominated. It is not surprising that in its White Paper the government has chosen to focus on these aspects, suggesting thereby that while the balance of payments crisis of 1990-91 was explained by India's external indebtedness becoming unsustainably high, leading to loss of investor confidence and consequent haemorrhaging of reserves, the adjustment programme since then has been quite successful, even if not fully adequate yet.

However, focusing on debt alone can result in a false sense of complacency about the country's payments position. In the period since the initiation of the process of adjustment, there has been a substantial shift in the external financing pattern. In particular, commercial lenders were slow to respond to the adjustment effort, so that only recently was the country's 'below investment grade' credit rating revised by the leading credit rating agencies. This, however, did not prove a problem from a financing point of view. Initially, the government took recourse to a large volume of conditional IMF credit in the immediate aftermath of adjustment. Subsequently, the recessionary effects of adjustment and a remarkable increase in remittance receipts by around $ 3 billion in 1994-95 resulted in a sharp drop in the current account deficit. And more recently, a rise in the volume of non-debt foreign investment flows, particularly portfolio capital flows, has substituted for debt. In 1993-94, for example, foreign investment flows accounted for $ 4,110 million out of a total of $ 9,183 million of net capital inflows and in 1994-95 the figure stood at $ 4,895 million out of a total of $ 6,839 million. This shift in the structure of balance of payments financing not only resulted in a deceleration in the growth of debt, but also meant that whatever fresh borrowing was resorted to was in effect going into boosting foreign exchange reserves. During the four years between end-March 1991 and end-March 1995, increase in debt accounted for 86 per cent of the rise in foreign currency reserves in dollar terms.

But it is not just the growing dependence on volatile portfolio investment flows that demands caution in interpreting the foreign debt figures. The latest foreign trade statistics released by the commerce ministry, on the basis of customs data, show a very significant increase in the trade deficit during April-November this year to $ 3.30 billion, compared with only $ 1.66 billion in the corresponding period last year. On the basis of these estimates the commerce ministry has projected for the full year 1995-96 a trade deficit on customs basis of close to $ 5 billion, against an actual of just over $ 2 billion in 1994-95. The trade deficit is likely to be even larger when measured on the basis of actual payments, because of delayed export receipts and non-inclusion in customs data of certain imports such as defence purchases. The RBI estimate of the trade deficit in 1994-95 was $ 3.9 billion, or almost $ 2 billion more than the deficit estimated for that year on the basis of customs data. Taking this into consideration, the trade deficit on payments basis in the full year 1995-96 is likely to be close to $ 7 billion. This large $ 3 billion increase in the trade deficit suggests that the current account deficit which had stood at a modest $ 2.1 billion in 1994-95, because of a $ 3 billion rise in current transfers, could go up to as much as $ 6 billion in 1995-96.

Thus there has been a substantial deterioration in the current account of the balance of payments in the current year. Unfortunately, this has occurred in a period when the government's strategy of attracting non-debt foreign capital inflows has suffered a setback. Portfolio inflows during April-December 1995 have slumped to only $ 0.85 billion from $ 3.14 billion in the corresponding period last year. Even though foreign direct investment has been higher – at $ 1.25 billion during April-December 1995 compared to $ 0.76 billion in April-December 1994 – taken together, foreign investment flows are down from $ 3.9 billion in April-December 1994 to only $ 2.1 billion in April-December this year. Based on these figures, foreign investment inflows (both portfolio and direct investment) in the full year 1995-96 may be estimated at just about $ 2.7 billion, or almost half the $ 4.9 billion inflow on this account in 1994-95.

Will this reverse the improving debt scenario reported in the White Paper? With the current account deficit likely to be higher than last year's by almost $ 4 billion and foreign investment inflows likely to be down by over $ 2 billion, extra non-investment (mainly debt-creating) capital inflows of the order of $ 6 billion would normally have been required, assuming unchanged foreign reserves. However, rather than resort to debt to finance this gap, the government has chosen to run down reserves. After rising by over $ 17.9 billion in the four years up to March 1995, foreign exchange reserves have fallen by over $ 3.5 billion during April-November this year against an increase of $ 4.8 billion in 1994-95. As a result, we have the rather unexpected official prediction that the dollar value of total outstanding external debt is likely to be lower in March

1996 than in March 1995. Further, as the White Paper points out, flows of debt-creating capital provide only a partial basis for the estimation of changes in the dollar value of external debt because, subsequent to March 1995, the dollar has in fact appreciated against other currencies. So the dollar value of India's debt could be significantly lower at the end of March 1996 than a year back. If this does indeed happen, the government is unlikely to miss the opportunity to capitalise on its 'success' in significantly reducing external debt in its pre-election propaganda. But, given the disconcerting movements in the current account deficit and in investment flows indicated above, the process of debt reduction in the context of declining reserves and increasing rupee instability only emphasises that, because of recent shifts in the structure of the capital account, debt need not be a reliable index of the actual external payments situation. What is more, if the decline in reserves persists, as it is likely to, the government may once again be forced to revert to debt-financing, assuming of course that the international banks will continue to regard India as a creditworthy borrower.

HEALTH

Doctors' Strike

THERE is a certain notion that those delivering health care do so primarily out of a sense of service and that, having opted for such an occupation, they should not let material aspirations come in the way of the performance of their duties. This type of value judgment goes hand-in-hand with another which accommodates without flinching the computerised consulting-room-ensconced medical specialist charging a small fortune for a couple of minutes of 'consultation'. These parallel notions of what is right translate into double standards: the public hospital doctors have no moral right to seek redressal of their grievances, however justified, in the acknowledged way of 'downing tools', but the private sector doctor who has to 'make a living' has no choice but to extract what he will from the patient. Interestingly though, the current strike by the Maharashtra Association of Resident Doctors (MARD) for rationalisation of pay scales and more human living and working conditions has evoked far less criticism than earlier such actions. The reason is not that the resident doctors' woes are better understood, but that perhaps the entire issue of public hospitals impinges on the concerns of the vocal urban middle class much less now than before.

The resident doctors have been seeking rationalisation of pay scales for a long time. The issue of poor pay and working conditions has been a long-standing grievance and the association has been striking work periodically on these demands since 1971. In 1987 the Supreme Court ordered all state governments to implement the uniform residency scheme (URS) by 1992. Under the scheme the postgraduate doctor was entitled to a salary, dearness allowance, etc, on par with other government servants. It acknowledged that the public health system was for all purposes run by these student-doctors. Some states, among them Uttar Pradesh and Delhi, have implemented the apex court's directive. The URS not only lays down standards of instruction, etc, but also pay-scales and norms for living and working conditions. The Maharashtra government has 'in principle' decided to implement the scheme, but has not gone beyond that. Each time the RMOs have gone on strike, the state government has put off a decision by offering an interim rise in pay and other small concessions. The arguments put forward by the government then and now, with the change of political colour making little difference, has been that the RMOs are students, that they are 'using' the public hospitals to get their specialisation degrees, and that the exchequer is already spending Rs 7 lakh per doctor on their education. This ambiguity about the status of the RMOs and their role in the health system has lead to a piecemeal approach to the entire problem. This is also at the root of the manner in which the state authority, every time there is a strike, has used repugnant means to break it and to neutralise any gains the doctors may have made. In 1991-92, the striking doctors, after having suffered the usual repressive measures unleashed by the government and after an agitation lasting 62 days, accepted an interim relief of Rs 500 per month. But in a parallel move the government raised the tuition fees to Rs 6,000, something which had not been done even in the states which had implemented the URS.

The state has also argued that accepting the URS would mean that the state would have to foot an additional bill of Rs 12 crore a year. Given that the Rs 532 crore public health budget is already stretched thin, the additional burden, it is argued, would mean that health care in the state would further suffer. The point which is deliberately glossed over is that without the RMOs the large urban public hospitals will cease to function. In other words, the 5,000-odd doctors currently on strike are essential functionaries of the urban public health system as it is constituted today. In the circumstances, implementing the URS will necessarily mean tilting the health budget even more towards the urban system. The only way to avoid this is to inject more finances into the health budget. Against the background of shrinking welfare inputs and the slide towards privatisation, the case for charging for services in public hospitals in order to generate resources will inevitably be strengthened, unless organisations like MARD put forward their demands within a larger perspective which locates the need for strengthening effective, accessible public health services as its central focus.

This is even more imperative in the context of the statement by Maharashtra's secretary for medical education, K Baroi, that the number of postgraduate medical seats in the state will be reduced to 900 from the existing 2,495, in accordance with the norms laid down by the Medical Council of India of 10 beds per seat. Said Baroi, "we want to ensure quality education". It is hard to say whether this is simply a short-sighted move or a well thought-out plan. Reducing the number of postgraduates will have a wide-ranging impact: one, it will mean substantial collapse of the urban hospitals unless an equivalent number of permanent posts are created, which the government's finances will not permit; second, reducing the number of seats across specialities will mean that specialities which are badly needed will remain under-serviced; and third, the better educated specialists will not, even if they were inclined to, find space in the shrunken public health system and, therefore, it will be the paying patient in the private sector who will benefit from this 'quality education'. While this is not an argument for the expansion of medical specialities, it points to the fact that the old rural vs urban, private vs public and primary vs tertiary care dichotomies need to be re-examined and refined in the context of the prevailing chaos in health care.

BJP

Looking for Allies

ORGANISING national conventions frequently has been one of the ways of the Bharatiya Janata Party (BJP) to advertise itself as a contender for power at the centre. National conventions are occasions for the party to weave its neatly-packaged, alliterative rhetoric which is supposed to mark it as a 'party with a difference'.

This time, in New Delhi, the party believes it has found a 'mantra' to spark off its election campaign in 'suraksha' (national security) 'swadeshi' (economic sovereignty) and 'suchita' (cleanliness in public life). In the recently - concluded convention, the party unveiled a long programme of 'yatras' and 'adhiveshans' to carry its message to the people. Except for L K Advani's infamous rath-yatra, none of the yatras organised so far by the BJP, the VHP or the Swadeshi Jagran Manch has evoked much popular response.

The BJP's attempt to project itself as all geared up for the Lok Sabha elections does not carry much conviction. The tug-of-war between the two rival factions of Shankersinh Waghela and Keshubhai Patel in Gujarat continues unabated, while in Madhya Pradesh ex-chief minister Sunderlal Patwa is at loggerheads with Lakshmi Narayan Pandey, the state party president. Similarly, the appointment of Pramod Mahajan as the secretary of the central election committee

and central parliamentary board and as the head of the election management committee has not won universal approval in the party's Maharashtra unit

The BJP seems to be aware that even if it performs well in the elections, it will not be in a position to stake a claim to forming the government at the centre on its own Though negotiations with N T Ramarao's Telegu Desam in Andhra Pradesh and AIADMK in Tamil Nadu have failed, the party is hopeful about Punjab, Haryana, Assam and Bihar George Fernandes's Samata Party, which flopped miserably in the last assembly elections in Bihar, has decided to align with the BJP in Bihar Though Fernandes may invoke the spirit of Lohia's anti-Congressism to justify his alliance with the BJP, it is clear that he and Nitish Kumar, both of whom are to contest the Lok Sabha poll from Bihar, need the prop of the BJP if they are to stand any chance against Laloo Prasad Yadav's Janata Dal Except Shiv Sena in Maharashtra, all the other parties looking for election tie-ups with the BJP are doing so in a desperate bid for political survival and are unlikely to add much to its electoral muscle

SALT

Iodine Obsession

THE lack of a comprehensive and coherent policy for health care is beginning to tell With so many factors affecting health status and health care the sector has always been hostage to changes outside its sphere of control but now these interests are beginning to more directly make their impact on health policies The decision to ban the sale of non-iodised salt taken a couple of years ago by the union government, is one such controversial intervention The decision is to come into full effect from January 1 by when the central government notification will have been implemented by all state governments and except for small areas exempted from the order, it would not be legal to sell non-iodised salt The one major exception was Gujarat which is the largest manufacturer of edible salt in the country Accepting a plea from the state's small salt manufacturers the state government had put off enforcing the ban on non-iodised salt till December 31 this year That period of reprieve is now ending

Interestingly, while the issue of making the iodisation of all edible salt mandatory had raised a lot of dust initially, over a period of time the focus has shifted from the health angle to the gains and losses of various sections of the salt industry The union government's rationale for introducing the measure therefore remains unclear to this day. Lack of iodine in the diet causes numerous health problems resulting in a condition called goitre, which is the abnormal growth of the thyroid gland In pregnant women this condition can seriously affect the foetus. The fact however is that the government's own surveys show that goitre affects large proportions of the population in small pockets, generally in the interiors or in the hilly regions. In Maharashtra, for instance, a survey conducted by the national goitre control programme in 1989 showed that in some pockets 20 per cent of the population was affected by the condition Similarly, over a period of years, the programme has conducted small area surveys in several regions where goitre has been known to be endemic Goitre endemicity has been fairly well mapped out Quite evidently, this type of goitre which is a nutritional deficiency can be largely controlled by diet changes Earlier, under the NGCP, iodised salt was distributed to the affected populations Since the numbers affected in these regions were large and there needed to be a permanent change in the type of salt consumed, the government's argument was that all salt sold in these regions should be iodised The problem however was that there were several pockets of goitre endemicity across the country and it would be impossible to ensure the sale of only iodised salt in these pockets The better solution, it was argued was to ban the sale of non-iodised salt, especially because the small excess consumption of iodine would not cause ill-effects to a normal population The argument is typical of the mechanical approach adopted in health programmes The NGCP could have been redesigned with a more intensive and innovative health education programme which would enable people to make a rational decision about the kind of salt to consume This paternalistic approach to people's welfare is no doubt convenient for the government but causes distortions in the system For one thing, non iodised salt manufactured from sea water contains about 6 per cent iodine and it is only rock salt which is totally lacking in iodine It is a moot question if doubling the content of iodine in this salt, as is being done through iodisation was necessary at all for entire populations even in goitre endemic regions And as for those in non-endemic regions especially along the coast the issue is entirely different Iodisation involves the addition of potassium and it has been pointed out that this leaves the salt enriched with unwanted potassium while the iodine vaporises

If then the health reasons are weak are there other reasons for the government's decision? The outcome of the government order has been that salt which was available very cheap is now sold only as a packaged branded product and at a few hundred times the original price and the actual cost of manufacture Salt-making has been traditionally a 'small enterprise' employing local people With iodisation and the entry of brands, the whole activity is being transformed in many ways most notably in the transfer of land taking place from the small producers to the big corporate manufacturers It would be naive to believe that such an outcome was not envisaged and that the large manufacturers, existing and potential, had no say in the matter

POLITICS

For a Better After-Life

J V Deshpande writes

IT must be said to the credit of our rulers that even when preoccupied night and day with the overwhelming problems facing the country, they do not lose sight of their spiritual well-being Most of them have a resident guru or a saintly 'Ma' tucked away to provide spiritual solace on tap In a land as diverse as this, there is an astounding variety of ways to get a spiritual fix regularly Some like to have a holy man place his foot on their head while others perform havans to different deities Much is also supposed to be gained by way of holiness by spreading a chaddar at a dargah or by distributing prasad' on auspicious days at holy places

The president of the country S D Sharma has seemingly chosen a more arduous path for attaining nirvana He has been visiting holy places all over the country Recently in Maharashtra he visited among other places temples at Pandharpur and Tuljapur and shrines at Shirdi and Alaudi This is apparently not his first pilgrimage to these places It has been reported that he has visited Pandharpur as many as eight times

For an assured passage to the next world a single pilgrimage to the Haj or to Kashi-Rameshwar is believed to suffice But the pious soul that he is the president evidently has in mind not just his own salvation but that of the vast number of his less fortunate brethren who cannot go on pilgrimages at public expense By making repeated pilgrimages he no doubt hopes to intercede on their behalf for a better after life After all since so little can be done for the betterment of their present life why not a little work for a better after life at least'

Times have changed and so have the mores of our rulers Only a few decades back a president such as Rajendra Prasad or a prime minister such as Lal Bahadur Shastri went about their religious observances in unobtrusive ways joining thousands of others in taking a dip in the Ganga at the Kumbh Mela Today no visit of a VIP can take place without causing hardship to thousands President Sharma's visit to Shirdi reportedly cost upward of Rs 20 lakh in local expenses standing crops had to be destroyed to make room for a helipad and thousands of other devotees had to cool their heels till the good president had completed his worship

With all that it may be asked if it is not something to be thankful for that our rulers go to Shirdi and Tirupati rather than to Monte Carlo or Acapulco as the rulers of many developing countries are wont to

CURRENT STATISTICS

The annual rate of inflation declining in recent weeks has touched the lowest level in 118 weeks at 6 9 per cent with an absolute decline in the WPI, a rare occurrence. Large annual increases continue however in the consumer prices indices RBI data show a phenomenal rise in the value of cheques cleared after 1990-91 The number of cheques cleared in the centres managed by the RBI rose by 27 5 per cent between 1990-91 and 1994-95 and their value by 91 per cent due partly to the inclusion of inter bank and high value cheques For the same reason Bombay's share in the value of cheques cleared shot up from 20 per cent in 1989-90 to 55 5 per cent in 1994 95 with New Delhi Madras and Calcutta trailing a long way behind At Rs 40 67 213 crore the value of cheques cleared in 1994 95 was four and a half times the year s GDP at market prices

Macroeconomic Indicators

Index Numbers of Wholesale Prices (1981-82=100)	Weights	Dec 9 1995	Variation (Per Cent) Point-to-Point: Over Month	Over 12 Months: Latest	Over 12 Months: Previous	Fiscal Year So Far: 1995 96	Fiscal Year So Far: 1994 95	1994 95	1993-94	1992-93	1991-92
All Commodities	1000	299 3	02	69	113	49	84	104	108	70	136
Primary Articles	323	3107	05	73	129	64	118	127	115	30	153
Food Articles	174	3433	04	76	100	94	138	119	44	54	209
Non Food Articles	101	3294	10	71	202	18	98	155	249	-14	81
Fuel Power Light and Lubricants	107	284 3	00	10	53	-01	12	24	131	152	132
Manufactured Products	570	295 7	01	79	115	51	78	107	99	79	126
Food Products	101	281 3	-06	23	105	32	91	81	123	68	102
Food Index (computed)	275	320 5	00	58	101	73	122	106	70	58	171
All Commodities (Average Basis) (April Dec 09 1995)	1000	294 8	–	95	103	88	107	109	83	101	137

Cost of Living Indices	Latest Month	Variation (Per Cent) Point to Point: Over Month	Over 12 Months: Latest	Over 12 Months: Previous	Fiscal Year So Far: 1995 96	Fiscal Year So Far: 1994 95	1994 95	1993 94	1992 93	1991-92
Industrial Workers (1982=100)	319[m]	06	104	103	89	82	97	99	61	139
Urban Non Man Emp (1984 85=100)	249[s]	08	97	97	20	23	99	83	68	136
Agri Lab (July 60 to June 61=100)	1411[n]	-01	115	116	85	77	106	116	07	219

Money and Banking (Rs crore)	Nov 24 1995	Variation: Over Month	Fiscal Year So Far: 1995 96	Fiscal Year So Far: 1994 95	1994 95	1993 94	1992 93
Money Supply (M_3)	561340	2039(0 4)	30538(5 8)	40356(8 9)	78617(17 4)	73307(19 3)	50916(15 5)
Currency with Public	111973	1051(-0 9)	11184(11 1)	10567(12 9)	18806(22 9)	14170(20 9)	7111(11 7)
Deposits with Banks	442317	1212(0 3)	15684(3 7)	28161(7 7)	58956(16 0)	57925(18 7)	43377(16 3)
Net Bank Credit to Govt	244395	1777(0 7)	21979(9 9)	8970(4 4)	16325(7 9)	28315(15 9)	18657(11 7)
Bank Credit to Comml Sector	310165	5084(1 7)	20510(7 1)	14800(6 0)	44991(18 4)	17147(7 5)	30187(15 3)
Net Foreign Exchange Assets	75826	252(0 3)	-98(-0 1)	18690(35 5)	23298(44 3)	27674(110 9)	3726(17 6)
Reserve Money (December 01 1995)	185315	503(-0 3)	16039(9 5)	20375(14 7)	30607(22 1)	27893(25 2)	11274(11 3)
Net RBI Credit to Centre	115059	583(-0 5)	16146(16 3)	-2125(-2 2)	2130(2 2,	260(0 3)	4257(4 6)
Ad hocs Treasury Bills	35580	1890	12100	1915	1750	6300	6445
Scheduled Commercial Banks (December 08 1995)							
Deposits	400518	2866(0 7)	13659(3 5)	24893(7 5)	53630(16 1)	52144(18 6)	39017(16 1)
Advances	229490	2239(1 0)	17930(8 5)	11997(7 0)	40638(23 8)	11566(7 3)	23757(17 5)
Non Food Advances	217793	3269(1 5)	18508(9 3)	8215(5 1)	37797(23 4)	8875(5 8)	21684(16 6)
Investments	160154	5012(3 2)	10901(7 3)	17106(12 6)	13965(10 3)	28641(26 9)	16820(18 7)

All monetary and banking data presented here are based on March 31 figures after closure of government accounts

Index Numbers of Industrial Production (1980 81=100)	Weights	July 1995	Fiscal Year So Far: 1995 96	Fiscal Year So Far: 1994 95	Average for Full Fiscal Years: 1994-95	1993 94	1992 93	1991 92	1990 91	1989 90
General Index	1000	260 1	256 8(11 5)	230 3(8 9)	250 6(8 4)	231 1(5 6)	218 9(2 3)	213 9(0 6)	212 6(8 2)	196 4(8 6)
Mining and Quarrying	115	242 7	242 3(14 8)	211 0(1 9)	245 8(6 3)	231 2(3 4)	223 7(0 6)	222 5(4 5)	221 2(6 3)	211 6(7 9)
Manufacturing	771	252 0	247 3(10 8)	223 1(10 4)	241 8(8 8)	222 3(5 5)	210 7(2 2)	206 2(-0 8)	207 8(8 9)	190 7(8 6)
Electricity	114	332 3	335 8(12 5)	298 6(7 1)	314 6(8 5)	290 0(7 4)	269 9(5 0)	257 0(8 5)	236 8(7 8)	219 7(10 9)

Capital Market	Dec 29 1995	Month Ago	Year Ago	1995 96 So Far: Trough	1995 96 So Far: Peak	1994-95: Trough	1994-95: Peak	End of Fiscal Year: 1994 95	1993-94	1992-93
BSE Sensitive Index (1978 79=100)	3110(-19 9)	3042	3885(15 2)	2944	3583	3233	4604	3261(-13 7)	3779(65 7)	2281(-46 8)
National Index (1983 84=100)	1431(22 9)	1378	1856(14 6)	1342	1691	1572	2176	1606(-12 2)	1830(79 2)	1021(-48 1)
BSE-200 (1989 90=100)	314(-28 8)	304	441(8 1)	296	385	360	497	368(-18 2)	450(92 3)	234(-60 0)
NSE (Nov 3 21 1994=100)	69(-27 4)	67	95	72	83	–	–	79	–	–

Foreign Trade	October 1995	Cumulative for Fiscal Year So Far: 1995 96	1994 95	1994-95	1993 94	1992 93	1991-92	1990-91
Exports Rs crore	8684	55275(27 5)	43356 (4 0)	82330(18 4)	69547(30 4)	53688(21 9)	44042 (35 3)	32553(17 6)
US $ mn	2469	17204(24 5)	13820(13 9)	26233(18 3)	22173(20 4)	18537(3 8)	17866(-1 5)	18143(9 1)
Imports Rs crore	9810	63955(34 0)	47732(19 8)	88705(21 8)	72806(15 7)	63375(32 4)	47851(10 8)	43193(22 0)
US $ mn	2703	19905(30 8)	15215(19 8)	28251(21 7)	23212(6 8)	21882(12 7)	19411(-19 4)	24073(13 2)
Non POL US $ mn	2297	16249(34 8)	12075(30 6)	22538(29 1)	17456(10 6)	15782(12 3)	14047(-22 2)	18045(3 1)
Balance of Trade Rs crore	-1126	8680	-4379	-6375	-3259	-9687	-3809	-10640
US $ mn	234	-2701	-1395	-2018	-1039	-3345	1545	-5930

Foreign Exchange Reserves (excluding gold)	Dec 15 1995	Dec 16 1994	Mar 31 1995	Variation Over: Month Ago	Year Ago	Fiscal Year So Far: 1995-96	Fiscal Year So Far: 1994-95	1994-95	1993 94	1992-93	1991-92
Rs crore	60517	61137	66028	209	-621	5512	13511	18402	27430	5385	10223
US $ mn	17349	19425	20816	-199	2076	-3467	4249	5640	8724	731	3383

Statistics on Cheques Clearances

Centres	Number of Cheques Cleared in Lakhs									Value of Cheques Cleared in Rupees Crore								
	1994-95	1993-94	1992-93	1991-92	1990-91	1989-90	1985-86	1980-81	1970-71	1994-95	1993-94	1993-92	1991-92	1990-91	1989-90	1985-86	1980-81	1970-71
I Centres Managed By RBI																		
Total	4485	4737	4618	4132	3519	3349	2487	1327	733	3514402	3198789	3237476	2922990	1839376	603304	290145	128992	27599
	(64.0)	(62.3)	(60.1)	(57.6)	(46.1)	(56.8)	(66.9)	(59.3)	(65.4)	(86.4)	(82.7)	(87.5)	(85.9)	(80.4)	(65.1)	(72.6)	(69.5)	(74.7)
Bombay *	1783	1672	1535	1461	1253	1188	616	662	366	2255693	2146405	2350535	2022122	1182587	185467	113977	56379	13342
	(25.5)	(22.0)	(20.0)	(16.8)	(16.4)	(20 1)	(16.6)	(29.6)	(32.6)	(55.5)	(55.5)	(63.5)	(59.4)	(51.7)	(20.0)	(28.5)	(30.4)	(36.1)
New Delhi *	856	748	752	655	552	563	601	165	65	561044	410704	328238	395748	239979	107942	51935	16644	2626
	(12.2)	(9.8)	(9.8)	(7.5)	(7.2)	(9.5)	(16.2)	(7.4)	(5.8)	(13.8)	(10.6)	(8.9)	(11.6)	(10.5)	(11.7)	(13.0)	(9.0)	(7.1)
Calcutta *	503	453	455	396	328	322	392	193	130	200710	157629	138723	128250	104051	81477	43024	21324	6923
	(7.2)	(6 0)	(5.9)	(4 6)	(4.3)	(5.5)	(10.5)	(8.6)	(11.6)	(4.9)	(4.1)	(3.7)	(3.8)	(4.5)	(8.8)	(10.8)	(11.5)	(18.7)
Madras *	413	464	448	399	357	331	230	91	81	219313	224718	209346	196638	176123	119705	22333	9133	2139
	(5.9)	(6.1)	(5.8)	(4.6)	(4.7)	(5.6)	(6.2)	(4.1)	(7.2)	(5.4)	(5.8)	(5.7)	(5.8)	(7.7)	(12.9)	(5.6)	(4.9)	(5.8)
Ahmedabad *	569	582	588	496	365	362	200	-	-	97943	78314	60746	5700	42089	33809	16744	8900	-
	(8.1)	(7.6)	(7.7)	(5.7)	(4.8)	(6.1)	(5.4)	-	-	(2.4)	(2.0)	(1.6)	(0.2)	(1.8)	(3.7)	(4.2)	(4.8)	
Bangalore *	260	275	256	231	224	185	170	95	38	75614	62085	47513	36452	29268	18993	12827	6275	984
	(3.7)	(3.6)	(3.3)	(2.7)	(2.9)	(3.1)	(4.6)	(4.2)	(3.4)	(1.9)	(1.6)	(1.3)	(1.1)	(1.3)	(2.1)	(3.2)	(3.4)	(2.7)
Hyderabad *	113	217	232	197	203	168	107	59	20	27311	54591	45608	36852	25183	20591	11316	5229	569
Jaipur	116	106	117	97	72	70	59	-	-	20870	16374	14352	12304	8738	7999	4212	-	-
Kanpur	71	62	69	59	50	51	42	28	18	15924	14251	11912	10974	9614	8309	5133	2228	613
Nagpur	68	61	68	60	53	51	37	25	11	13220	10746	9635	8713	7627	6416	3335	1391	242
Patna	31	34	37	28	20	18	12	8	4	6042	6188	5911	5232	4559	3834	2159	1101	161
Bhubaneshwar	15	12	12	10	7	6	4	2	-	5456	4529	4961	3580	2408	2163	1121	388	-
Trivandrum	29	28	23	23	20	19	15	-	-	6889	5415	3942	3698	2908	2357	1523	-	-
Guwahati	27	22	26	20	15	15	2	-	-	8373	6840	6051	5427	4242	4337	506	-	-
II Centres Managed By Agencies																		
Total #	2520	2872	3061	4551	4121	2547	1232	909	388	552811	670076	464535	481265	447895	322870	109503	56710	9372
	(36 0)	(37.7)	(39.9)	(52.4)	(53.9)	(43.2)	(33.1)	(40.7)	(34.6)	(13.6)	(17.3)	(12.5)	(14.1)	(19.6)	(34.9)	(27.4)	(30.5)	(25.3)
Delhi	87	198	198	183	173	-	126	125	60	39050	106298	49031	56915	57288	-	8317	5627	1200
Surat	361	359	503	2191	1861	838	26	-	20	32702	29989	21961	22255	18065	11304	3201	-	384
Pune	62	34	82	38	67	34	65	54	61	29737	27485	18884	14667	14449	5288	4636	2620	732
Coimbatore	73	62	58	55	53	48	36	24	12	20167	13350	10849	9511	7534	6236	3210	1444	288
Baroda	162	157	146	148	114	62	38	-	8	18340	17374	14728	13052	10904	7227	1937	-	264
Lucknow	59	59	52	42	38	35	-	7	9	12301	14177	10821	9286	9053	7677	-	767	192
Ludhiana	97	129	115	107	117	62	44	25	9	11580	13551	12401	10994	11642	6525	3862	1291	168
Madurai	44	80	108	54	40	31	26	20	8	6677	4318	1135	1464	3793	2582	1471	792	120
Amritsar	37	41	40	57	30	32	28	25	14	5678	5574	4702	4350	4136	3212	2267	1142	288
Mangalore	25	27	27	24	21	13	13	9	4	4757	4355	3640	3186	2252	1362	1067	559	96
Cochi	12	9	9	9	9	8	7	5	4	4177	3324	2861	2826	2551	2200	1519	707	324
Others	1479	1715	1721	1642	1600	1386	822	593	141	367647	430329	313522	332758	306226	269256	78017	39984	3264
Grand Total (I+II)	7005	7609	7679	8683	7640	5896	3719	2236	1121	4067213	3868865	3702011	3404255	2287271	926174	399648	185702	36971

Figures in brackets are percentage to grand total- Not available.

* Data are inclusive of inter-bank and high value clearing since 1990-91 for Bombay, New Delhi and Calcutta and for Madras since 1989-90 Inter-bank data for Hyderabad are included since 1991-92.Inter-bank data for Bangalore and Ahmedabad are not available upto 1992-93.

Total includes Ahmedabad till 2 4.1975 and Jaipur till 18.11.1984. Total (Agency clearing) are not strictly comparable as number of centres included under other centres varies time to time consequent upon opening of new centres etc Ahmedabad, Bhubaneshwar, Trivandrum, Jaipur and Guwahati centres were taken over by Reserve Bank of India at different times.

MCDOWELL & CO

Expansion Plans

THE flagship company of the Vijay Mallya group, McDowell & Co, one of the largest players in the spirits industry, closed the financial year ended March 1995 with a sales turnover of Rs 669 crore, up by 52 per cent from Rs 439 crore achieved in the previous year. Other income rose by 229 per cent. Interest costs increased by 36 per cent. An increase in the provision for depreciation by 50 per cent was nullified to a certain extent by a fall of 15 per cent in the provision for taxation, leaving the company with a net profit of Rs 14 crore, up by 7 per cent from Rs 13 crore recorded in the previous year. A dividend of 20 per cent has been recommended.

The spirits division grew both in terms of volume and revenue by 56 per cent and 48 per cent, respectively. Aggressive marketing was used by the company to compete against the multinationals, the result being that advertising expenditure which went up by 44 per cent. The introduction of total prohibition in Andhra Pradesh coupled with the unfavourable availability and prices of molasses and rectified spirit compounded the problems but, according to the company, several measures were taken to protect profitability. The company's brands continued to grow and consolidate their position.

During the year under review, the polymers division increased its sales by 16 per cent in volume terms and 38 per cent in value terms. A rise in the price of styrene, the raw material for polystyrene, in the international markets did little to dampen profitability as the company has the capacity to manufacture its own styrene.

The company is expanding its polystyrene capacity by putting up a Rs 60 crore, 40,000 tonne plant in Gujarat which is expected to commence operations by June 1996. This is apart from the 40,000 tonne capacity the company already has in Visakhapatnam. Expansion plans are afoot at Vizag too where the company will be expanding its plant by 10,000 tonnes to 50,000 tonnes taking the total capacity of the company to 90,000 tonnes at both the places. After June 1996, the company is planning to add to the capacities in both Gujarat and Vizag plants by putting up two 40,000 tonne plants each as a part of its second phase of expansion which is expected to go on stream by April 1998. The company is also expanding its expandable polystyrene capacity from 6,500 tonnes to 11,000 tonnes by the end of 1995. This will be further raised by 13,000 tonnes by December 1997. With all these expansion plans in place the company is expected to become the largest producer of expandable polystyrene in the country.

The company will be introducing Bols Wesanans wines and spirits by end-96. According to Shekhar Ramamurthy, controller, marketing, "the tie up with the Dutch conglomerate Bols Wesanan is in the nature of a franchise arrangement wherein Mcdowell will manufacture the Bols' range at our own manufacturing facility in Baramati Grape Industries, Maharashtra, under the desired specifications". The tie-up is targeted towards the young upwardly mobile consumer.

ASIAN PAINTS

Buoyant Demand

A leader in the decorative paints market, Asian Paints controls almost 40 per cent of the decorative paints segment which constitutes around 76 per cent of the total paints industry. The company has factories in Bombay, Gujarat, Andhra Pradesh and UP with an installed capacity of 1.08 lakh tpa for paints, enamels and varnishes, 24,000 tpa for synthetic resins and 18,000 tpa for pthalic anhydride (PAN).

The company closed the financial year ended March 1995 with net sales of Rs 512 crore, up by 27 per cent from Rs 402 crore recorded in the previous year. Other income stood at Rs 9 crore, a rise of 33 per cent from Rs 7 crore achieved in the previous year. Interest costs came down by 2 per cent. Provision for depreciation and taxation rose by 10 per cent and 77 per cent, respectively. A massive surge in non-operating profit was reflected in the healthy bottomline which rose by 70 per cent from Rs 26 crore to Rs 44 crore for the year under review. Enthused by the buoyant performance, dividend has been stepped up to 65 per cent from 50 per cent in the previous year. The company has recommended a 1:1 bonus, the earlier bonus being in 1992-93.

Reduction in the excise duty has helped the company to stem the competition from the unorganised sector which is in control of about 50 per cent of the market for decorative paints. The stiff competition being offered by the unorganised sector has made the company extremely cautious in effecting price hikes, which have been no more than 2 per cent.

Raw material costs comprise about 50 per cent of sales. The principal raw materials used in paint manufacture are titanium dioxide, pentaerythritol and PAN. While most inputs are available within the country, they have seen a rising trend, as crude prices are on the rise globally. Administered prices of oil in the country have not been raised and a rise in the same would put a spanner in the growth of the industry.

The paints division registered a growth i sales of 25 per cent. The company has bee appointed as sole supplier of paints to Daewo and General Motors.

The PAN division saw a sales growth 12 per cent. PAN is a petrochemical use in the production of paints , dyes an plasticisers. Orthoxylene, the basic ra material used for the manufacture of PA is partly imported by the company. Th company is also sourcing orthoxylene fro other major producers like India Petrochemicals Corporation. Asian Paints sourcing a total amount of 18,000 tonnes f its PAN plant at Ankleshwar. The contributio from the PAN division to the tune of Rs 7 crore has been possible on account of firmin up of prices of PAN due to surge in domesti and international demand.

Exports of the company for the year und review stood at Rs 10 crore against Rs 3 cro in the previous year. Exports of the Pthali division amounted to Rs 5 crore against R 1 crore in the previous year. The company overseas subsidiaries performed satisfaction.

The company plans to expand the existin capacities for the manufacture of paints an enamels to 50,000 tonnes at each of its plan in Ankleshwar, Patancheru and Kasna. Th company has a plan to set up a ne manufacturing facility at Mangalore.

The company is proposing to set up a pla in Mauritius as a part of its overseas expansio plan. Commercial production is expected t begin in 1996. Approvals from the concerne governments have been obtained though th legal formalities remain to be completed

The company is entering into collaboratio with PPG Industries of US for cathode electr deposition premiers (CEDS), and with Sigm Coatins, Holland, for corrosion coatings. Th company has tied up with Nippon Paints Japan for pre-treatment chemical automotive, powder, and coil coatings. Thes collaborations will enable the company have access to the latest technology. Th company has plans to manufacture ceram tiles and is seeking a technical tie up wit a foreign firm.

Pentasia Chemicals, a subsidiary, i engaged in the manufacture of pentaerythrit and formaldehyde. It had been incurrin losses due to lower realisations for its product and rising raw material costs. Pentasi Chemicals' principal feedstock is molasse which is a by-product generated during th manufacture of sugar. The decontrol molasses in 1993 led to a surge in molasse prices, eroding profitability and resulting i mounting losses for the company. It wa declared a sick company and, as per th scheme of rehabilitation-cum-merger, wa merged with Asian Paints. The merger prove advantageous as it gave the company th

(Rs lakh)

Financial Indicators	McDowell & Co March 1995	McDowell & Co March 1994	Asian Paints March 1995	Asian Paints March 1994	GTC Industries March 1995	GTC Industries March 1994
Income/appropriations						
1 Net sales	66933	43946	51158	40196	35707	26061
2 Value of production	66776	44018	54136	40415	34980	26299
3 Other Income	4091	1242	936	703	180	946
4 *Total income*	70867	45260	55072	41118	35160	27245
5 Raw materials/Stores and spares consumed	29254	14033	36033	27327	16279	11311
6 Other manufacturing expenses	15612	11757	669	588	11822	9458
7 Remuneration to employees	2842	1493	2581	2132	1360	1112
8 Other expenses	14080	10207	6841	5122	3442	2918
9 *Operating profit*	9079	7770	8948	5949	2257	2446
10 Interest	5014	3677	1027	1045	1127	1462
11 *Gross profit*	3955	3676	8019	4912	1664	1400
12 Depreciation	1282	856	767	700	59	80
13 *Profit before tax*	2673	2820	7252	4212	1602	1317
14 Tax provision	1290	1525	2900	1650	0	115
15 *Profit after tax*	1383	1295	4352	2562	1602	1202
16 Dividends	897	861	1294	996	720	388
17 Retained profit	486	434	3058	1566	882	814
Liabilities/assets						
18 Paid-up capital	4683	3807	1991	1991	1595	912
19 Reserves and surplus	21206	19849	14771	11677	16839	16042
20 Long term loans	15831	7589	2596	1871	6122	5846
21 Short term loans	5509	8321	6795	5474	5680	3281
22 Of which bank borrowings	647	4312	4726	1513	0	760
23 Gross fixed assets	30266	24784	13736	12340	15292	14448
24 Accumulated depreciation	13313	10831	4811	4066	5938	5649
25 Inventories	11552	6266	12876	7692	4413	4383
26 Total assets/liabilities	78702	58017	37542	28807	36122	30439
Miscellaneous items						
27 Excise duty	15423	10377	14499	12592	5043	3390
28 Gross value added	11623	8447	11483	7777	4818	4192
29 Total foreign exchange income	26	0	1071	449	1733	1969
30 Total foreign exchange outgo	11274	6823	6345	4686	383	100
Key financial and performance ratios						
31 Turnover ratio (sales to total assets) (%)	85.0	75.7	136.3	139.5	98.9	85.6
32 Sales to total net assets (%)	141.7	111.1	195.6	191.3	118.1	99.9
33 Gross value added to gross fixed assets (%)	38.4	34.1	83.6	63.0	31.5	29.0
34 Return on investment (gross profit to total assets) (%)	5.0	6.3	21.4	17.1	4.6	4.6
35 Gross profit to sales (gross margin) (%)	5.9	8.4	15.7	12.2	4.7	5.4
36 Operating profit to sales (%)	13.6	17.7	17.5	14.8	6.3	9.4
37 Profit before tax to sales (%)	4.0	6.4	14.2	10.5	4.5	5.1
38 Tax provision to profit before tax (%)	48.3	54.1	40.0	39.2	0.0	8.7
39 Profit after tax to net worth (return on equity) (%)	5.3	5.5	26.0	18.7	8.7	7.1
40 Dividend (%)	20.00	25.00	65.00	50.00	72.00	66.00
41 Earning per share (Rs)	2.95	3.40	21.86	12.87	10.04	13.18
42 Book value per share (Rs)	55.3	62.1	84.2	68.6	115.6	185.9
43 P/E ratio (based on latest and corresponding last year's price)	10.8	13.5	14.4	40.4	5.2	10.6
44 Debt-equity ratio (adjusted for revaluation) (%)	61.1	32.1	15.5	13.7	33.2	34.5
45 Short term bank borrowings to inventories (%)	5.6	68.8	36.7	19.7	0.0	17.3
46 Sundry creditors to sundry debtors (%)	70.7	40.8	41.6	25.1	22.3	24.1
47 Total remuneration to employees to gross value added (%)	24.5	17.7	22.5	27.4	28.2	28.5
48 Total remuneration to employees to value of production (%)	4.3	3.4	4.8	5.3	3.9	4.2
49 Gross fixed assets formation (%)	22.1	–	11.3	–	5.8	–
50 Growth in inventories (%)	84.36	–	67.39	–	0.68	–

facture of formaldehyde, pentaerythritol and pthalic anhydride. A turnaround was staged by Pentasia Chemicals in the first half of 1995-96 aided by the drastic downtrend in the prices of molasses in the last few months on account of bumper sugar production.

The reduction in excise duty and booming activity in the construction and industrial sector will translate into enhanced earnings for Asian Paints. The merger of Pentasia Chemicals will further enhance the company's earnings. The paint industry's expected growth of around 12-15 per cent could translate into buoyant demand for Asian Paints, the market leader.

GTC INDUSTRIES

Collaboration with Rothmans

Started as a proprietary concern in 1936, GTC Industries became a public limited company in 1971. Apart from manufacturing cigarettes in-house, the company has manufacturing agreements with Universal Tobacco and Geekay Tobacco for the manufacture on a job work basis. It has an agreement with Sikkim Tobacco Company, a joint sector undertaking with the Sikkim government. The company has an installed capacity of 17,322 million cigarettes.

A turnover of Rs 357 crore was achieved for the year ended March 1995, a rise by 37 per cent from Rs 261 crore achieved in the previous year. Other income fell by 81 per cent from Rs 9 crore to Rs 2 crore . A fall in the provision for depreciation by 26 per cent coupled with a zero tax provision enabled the company to close with a net profit of Rs 16 crore, a rise 33 per cent from Rs 12 crore. A dividend of 66 per cent has been declared.

The cigarette industry grew by 11 per cent for the year under review and a similar growth rate was achieved by the company. The growth was satisfactory, coming in the wake of poor growth in the preceding two years. The company has restructured its field operations to sustain growth rates and achieve better results. Changes in the prime export markets of the erstwhile Soviet Union and West Asia affected cigarette exports and GTC did not come out unscathed. Exports for the year under review declined to Rs 17 crore from Rs 19 crore in the previous year.

During the year under review, the company co-promoted DSS Mobile Communications, a paging operation. Rothmans of Pall Mall (International) and GTC Industries signed an agreement for setting up a joint venture company, Rothmans GTC (India). The new company will manage and co-ordinate the manufacture and marketing of Rothmans cigarettes in conjunction with GTC industries. The joint venture agreement envisages equal equity participation by both partners, this being the first time that a cigarette multinational will hold a 50 per cent stake in a joint venture.

UTTAR PRADESH

Towards an SP-Left Alliance?

Amaresh Misra

With BJP's rightist agenda appropriating centrist policies, the only option left for Mulayam Singh to combat BJP is to initiate a leftward shift

ANOTHER year is at an end and in Uttar Pradesh despite continuing trends of the past it has been a remarkable period After the break up of the SP BSP combine in mid-1995 and the subsequent course of the BSP it is possible that the caste phenomena which had so influenced the political contours of UP for at least half a decade is as dominant a factor That phase seems to be over and the state is all set to see new political polarisations in this crucial year when both assembly and parliamentary elections are due

A foretaste of things to come was given by results of the municipal corporation municipal panchayats and mayoral elections held in November The results threw up interesting indications for the future though their real message was not properly grasped in the subsequent analyses appearing in newspapers and journals From one point of view the capture of nearly half of the corporation seats by the BJP was an outcome of its already strong position in the cities and this did not constitute any major gain for the party On the other hand the poor showing of the Samajwadi Party (SP) – it won only one mayoral seat and could not manage even one third of the seats in wards considered to be its strongholds – cannot be taken as an evidence of the party's stature as its main strength lies in the villages

But neat assumptions rarely work in politics and the performance of the BJP and the SP provides a background from which future trends can be discerned For one the BJP did not merely repeat its past performance Its vote pattern showed that at several places it was able to consolidate its hold on the upper caste vote The much awaited shift of at least a small section of the upper castes towards either faction of the Congress did not take place For status quoist forces in the state the BJP remained their natural choice and at the hour of selection there was little flinching due to local factors The vote also proved that upper caste forces were not 'angry' with the BJP for having moved closer to the BSP for a short while At one time some columnists had thought this factor would make things difficult for the BJP and had seen in this, another possible source of the party losing it hold Their good intentions notwithstanding such predictions even then were quite suspect as in the politically charged atmosphere of UP, there has been a real polarisation of interests and their identification with political parties Hence, whatever the BJP did was seen by its support base from a partisan political view as something which 'their party' was doing in order to weaken the SP-BSP alliance, and not out of any new-found love for the dalits and the BSP

The BJP continued to gain support amongst the upper castes and conservative sections of UP, even when none of the attempts by its sister organisations, like the VHP to whip up passions at Kashi, Ayodhya and Mathura actually succeeded and the BJP had to maintain a low profile on the matter This shows that communalism has acquired an increasingly political and class character After the split of the yadav-dalit-Muslim combine, social equations are acquiring a new dimension, with many forces who were in between, like the most backward castes among the OBCs who had veered towards the SP BSP combine before, now exercising their options elsewhere Many of them shifted to the BJP in the civic elections and the BSP was relegated to its 1989 position The BSP's performance in the civic elections suggests that it now occupies the status of a dalit pressure group with its main base in west UP It can be recalled that the BSP had drawn blood, first in west UP, before expanding to east UP and Bundelkhand which returned the maximum number of its MLAs in 1993 In the civic elections BSP's performance in these regions was quite negligible and it was only in west UP that it could win a number of wards and a lone mayoral post

SHIFT IN MUSLIM BASE

In west UP, the Muslims sided with the BSP, even in the east they did not show the same keenness to follow Mulayam Singh Yadav Yet, even in some SP strongholds, Muslims stayed aloof or cast their vote in favour of Independents or even the BSP. In the Lucknow mayoral polls (the mayor was elected for the first time on direct franchise and many seats were reserved for women and scheduled castes), which the BJP won, the CPI-ML backed candidate of the Muslim Forum got more than 10,000 votes in spite of Mulayam's frantic appeals to the minorities The pattern exploded one more myth and showed that nothing can be taken for granted in UP any longer A mere anti-BJPism, especially of the 'liberal Hindu', 'Mulayam' (soft) variety is not sufficient to polarise the Muslims in a situation where the BJP's philosophy is getting sanction from the Supreme Court The Supreme Court has quoted 'liberal Hindu ethos of the land, which was used previously to combat the 'hard hindutva of the BJP as the very ground and justification for the propagation of the hindutva ideology The Muslims may still sympathise with the former chief minister or regard themselves closer to him than any other politician, but may no longer cast their votes unilaterally

This prospect is giving jitters to Mulayam Singh, in a bitter response to the 'betrayal' of Muslims in the civic polls, the former chief minister lashed out at the community at a meeting in Gorakhpur It was the same district where he had worn the Piyari dhoti, touched the feet of brahmins and called himself a true Hindu after his heady return to power in late 1993 Now he was complaining in an embarrassed tone about their lack of faith in him, and hinted that there may have been lapses from his side

Mulayam Singh's problems are also compounded by the fact that though he is considered the major anti-BJP force, he has yet to recover the ground which he lost during his tenure in office, infamous for its firing on Uttarkhand demonstrators and other undemocratic acts The lack of enthusiasm among the Muslims, despite their support has to be seen in this wider context In the civic elections, the SP failed in mobilising the anti-BJP sentiment Many apologists of Mulayam Singh and sections of secular intelligentsia were hard pressed to explain the poor showing of the SP But the truth is that there is an urgent need for the SP to redefine itself after the split of the social equation which had sustained it The SP also

requires a new agenda in keeping with the political polarisation that may now come to the fore. This polarisation will be based inevitably, on a left-right divide rather than centre-right one: the BJP has risen as a modern right wing party, appropriating part of the centrist agenda as well: that is why the Congress finds itself cornered.

In many ways, the old style ruling class centrism has taken a rightward shift, and the Congress has to make up its mind to take a right-of-the-centre or a left-of-the-centre position. The latter is being attempted by the Tiwari faction which is trying to rejuvenate the party on the old Nehruvian centrist basis. It is, of course, failing miserably in doing so; the other, more dominant, Rao faction is also attempting redefinition of centrism by combining a rightwards tilt with moderation and enlistment of new trends like dalits, Muslims and Uttarkhand in its agenda. But this effort too has shown little signs of success and the Congress now appears dependent on the governor for steering it towards a position of respectability before the president rule ends. The governor has recently given go-ahead for the trial of police officers and bureaucrats listed by the CBI as guilty in the Muzzaffarnagar case, and has opened a fresh initiative in the form of Uttarkhand Parishad. He has also brought Uttarkhand, as a backward area, under the purview of 27 per cent reservation. Through this he is hoping to contain the Uttarkhand movement and win support for the Congress in the hills; yet, success looks doubtful. There has been little let-up in state repression and recently, during the new phase of the student's movement which started from November, bodies of youth, killed allegedly in police custody, have been discovered. This has led to a fresh wave of anger and agitation throughout the hills.

Shifting Class Polarisation

The problem for the Rao Congress thus hinges again on the nature of class polarisation in UP where, unlike Bihar, the traditional ruling classes have emerged as a potent force. In Bihar, Laloo Yadav has been able to establish backward groups as a ruling force. He is now trying on that basis to unite certain sections of the upper caste landlord interests in order to evolve a consolidated power combination in the days to come. The traditional power groups are weak, unable to stand up to their backward rivals in the same measure. Laloo Yadav has therefore succeeded in giving a new lease of life to the centrist agenda in Bihar by involving a new social base, and is now attempting to emerge as a new Congress type, centre-right force. In UP, the situation is almost reversed; the backward caste forces are too weak to independently replace the traditional ruling powers. That is why, Mulayam fails constantly to emerge as a 'stable' political force like Laloo. Sometimes he has to rely on the left, sometimes on the BSP, for a dalit base. His attempts to emerge as a 'new Congress' fail because the social divisions in UP still allow traditional brahminical order to dominate. Therefore, a Bihar-type usurpation, where the backward castes found it easy to slip into the role left vacant by the upper caste forces and adopt the posture of 'neo-brahminism', is not easy in UP. In spite of trying his best and playing the neo-brahminical card, Mulayam was neither accepted by the upper castes nor was the upstart backward caste able to establish itself socially. Hence, the caste phenomena could not make a sufficient dent; here, challenges to the traditional order, even from within sections of the privileged for a share in power, have time and again failed because of the traditional 'liberal' plank the centrist opposition has always pursued.

This has also made the Janata Dal (JD) irrelevant in the present context. The scope of 'liberal centrism' is over and so is the space for 'radical centrism' – the kind of extension of centrist politics attempted by the SP and the BSP with the radical invocation of caste which was implicit in Ram Manohar Lohia's philosophy and only mildly explicit in the rise of the JD in the late 1980s. The intermediate forces that could have propped up such a 'radical' formation are weak in UP and are easily co-opted in the dominant status quo. In such a situation, the options before Mulayam Singh are either to put forward a Rao-Congress-BSP-SP kind of alliance, or to join the NF-LF, first the LF and then the NF, or to seek an alliance with a more left-oriented radicalism. The first option is problematic because of the BSP and the right-centre tilt of the Congress. The second option is also difficult due to the intense competition between the JD and Mulayam. Those who advocate an easy alliance between Mulayam and the NF-LF should bear in mind the fact that the real issue behind the parleys of these two forces, and the lengths to which they are stretching, is because of a concrete reality. The JD is trying its best to take advantage of the present situation when Mulayam is down, to marginalise him and make him accept the leadership of Laloo Yadav in the Hindi belt and of the JD at the national level. Mulayam, on his part, is trying to fudge the situation from which he has little to gain so far as UP politics is concerned. Hence, he has started looking for new allies: in a much publicised move, the former chief minister held talks with K D Yadav, the Bihar state leader of the CPI(ML), for a possible alliance in Bihar and UP. In both the states, the CPI(ML) is a contender of Laloo Yadav and the BSP; if Mulayam wants a foothold in Bihar, by going against Laloo, the CPI(ML) is the obvious choice he can turn to. Similarly, if he has to fill the void created by the BSP he has to again rely on the CPI(ML) which is challenging Kanshiram's party for the dalit base in east UP, Bundelkhand and Avadh. But above all, Mulayam's opting for the left in general (he has expressed intentions of 'going alone' in the next elections with the support of the left parties), and the radical left in particular, is a recognition that time is slowly arriving in the Hindi belt for a leftwards shift, a new kind of a polarisation based on left forces after the decline of the centrist politics. In both UP and Bihar, the CPI(ML) is better placed as a left force than the CPM and the CPI, and Mulayam has chosen to deal with the party even when it has been a bitter and consistent critic of the former chief minister. The CPI(ML) on its part has noted this development positively given that in UP where the BJP will remain a long-term threat, an understanding with Mulayam will be beneficial to the cause of secular democracy in the state. But the party still insists that Mulayam clear his record in the eyes of democratic circles on issues of Uttarkhand and the new economic policy. The CPI(ML) has also asked Mulayam to be more categorical and condemnatory of the Congress and the BJP on the Pakistan issue and the ongoing warmongering by the two parties. Mulayam, on his part, has yet to respond categorically, though in the SP convention he reaffirmed his intentions of striking an alliance with the left.

Karnataka's New Agricultural Policy

Making Way for Corporate Landlordism

Muzaffar Assadi

The Karnataka government's new agricultural policy and the amendments to the Land Reforms Act will have far-reaching consequences. It paves the way for 'corporate landlordism' while increasing the trends towards de-peasantisation and a sharpening of economic and cultural crisis in the countryside.

THE Karnataka government is currently bogged down in many controversies. It all began with the amendment to the Land Reforms Act and announcement of the New Agricultural Policy (NAP). The desecration of Ambedkar's statue by a minister's son and the poor management of electricity crisis by the government have further eroded government's support. Even the party's national allies like CPI, CPI(M) have decried the government dubbing that the latter is adopting "anti-farmer and anti-labour policy" and that, it "is negating the basic principles of Land Reforms Act". Further the criticism centred around the fact that "the policy is directed by the World Bank and is a mere translation of the agricultural policy announced by the union agricultural minister Balram Jhakar."

There were many reasons for introducing the NAP – although the government asserts in the policy document that the liberalisation policies of the Indian state is the sole prompt for the state government to resort to such a venture: "The objective of this policy document is to spell out a clear direction for strategy to create a prosperous rural society in Karnataka. It aims at spurring growth in the agricultural and allied sectors by taking advantage of opportunities opened up by trade at national and international levels, in an overall environment of economic liberalisation. It is growth in agriculture that would provide a momentum to growth in other sectors through its backward and forward linkages. The nature of growth that is envisaged would generate more employment and cut down poverty in rural areas in due course. This policy statement also aims at promoting efficiency in the use of resources simultaneously protecting environment."

The new agenda, which goes against the election promise that the Janata Dal made during the last election, began to evolve when the Karnataka government appointed two committees – a subcommittee on agriculture and an expert committee on private capital investment headed by Dwarakanath and Satishchandran respectively. However, the beginning of a new twist to the agricultural policy at the centre can be located during the Janata Dal's reign in 1989-90 when a Standing Advisory Committee on Agriculture was appointed under Sharad Joshi, leader of Shetkari Sanghatana to represent "the views of the farming community at the highest level of decision making in the central level". Some of its suggestions have been incorporated in the NAP of the Karnataka government. In fact, the Standing Advisory Committee on Agriculture began its arguments with the note that the Indian state, even after four decades of independence, has not been able to come out with a comprehensive agricultural policy nor was there any worthwhile debate on the role of agriculture in the process of economic development. Rather, it said the government was following a 'Food Policy' to ensure food supply, which in the final analysis, but perpetuates a neo-colonial policy. The tilt towards liberalisation is visible in the following recommendations of the Standing Advisory Committee: (a) abolition of all grants of subisidies at the levels of production; (b) making state intervention in the price determination and market a format one; (c) lowering the administrative costs; (d) encouraging the farmers to pool their holdings; (e) sending innovative young farmers abroad; (f) import of high quality of seeds; (g) shifting the population depending upon agriculture; (h) capital formation in agriculture; (i) initiating a real green revolution; (j) effective implementation of consolidation of land holdings and interdicting fragmentation beyond a certain limit; (k) divorcing agricultural production from the regime of statism and welfarism; (l) ensuring maximum export of commodities; (m) making easy the procedures for importing equipment and materials for agriculture.

The second important factor which has had some bearings on the NAP of Karnataka is the Agricultural Policy Resolution of Congress government in 1992. This policy resolution presented by the agricultural minister, Balram Jhakar, is in conformity with the liberalisation policies of the Indian state. The policy resolution had listed 17 challenges that the agricultural sector is facing today – at the levels of production, productivity, development, degradation, holdings, fragmentation, employment, co-operatives, research, terms of trade, etc. To overcome these challenges, including those coming from the international market, the resolution envisaged the following: freeing the co-operative movement from state control, developing agro-processing units, crop insurance, special thrust to the export of fruits, flowers, vegetables, poultry and livestock technology, land reforms so as to channelise energies for achieving greater production, accelerating the development of irrigated horticulture, floriculture, and aromatic plants.

Some of the recommendations are echoed by the Dwarakanath and the Satishchandran committees appointed by the Karnataka government. The former committee recommended that there should be minimum ceiling on the lands, certain lands (mainly seed producing and exporting) should be exempted from the purview of Land Ceiling Act, easing the provisions for leasing out the lands and establishing agro-based industries and create rural employment opportunities. The Satishchandran committee came out with the following major recommendations: discouraging those crops whose average yield is less than the average of the state; removing the restriction on the import of seeds; allowing the private sector in seed technology, extending subsidies to tools and techniques of the private sector; withdrawing the facilities of free supply of electricity to the agriculture; supporting research and development programmes by the private sector; allowing the leasing out of land for a minimum period of 20 years and finally relaxing the land ceiling laws.

All these have manifested in the NAP of the Karnataka government. NAP in fact has mooted the idea that against the backdrop of liberalisation according the status of an industry to the agricultural sector is not only feasible but also desirable. This can be done by extending similar facilities to agriculture and also appropriating the opportunities offered by the liberalisation policies of the Indian state: "The differences noticed beween industry and agriculture do suggest that giving agriculture the industry status can be an ultimate goal that is to be achieved gradually. In such a transition the strategy

[illegible] giving incentives and safeguards of the type given to industry, with appropriate modifications, ensuring elimination of discrimination against agriculture in the matter of credit, costing returns to investment, infrastructure markets, exports and research technology."

Private investment in the agricultural sector is the main idea mooted for transforming agriculture. Private investment is sought in seed technology, marketing, agro-processing, horticulture, floriculture, aquaculture, dairy farming, poultry, meat processing, seeds multiplications, cold storage, and research and development (R and D). To support the seed technology the NAP has favoured the leasing in of land, without realising the fact that this has had the consequences of de-peasantising rural categories. And that this would provide 'corporate landlordism' who might resort to force (as they did in Ranebennur during 1980s) intimidation to lease in land from the peasants at throwaway prices to emerge in the countryside. The NAP, however, is hoping that in the subsequent five years Rs 50,000 crore will be invested in the agriculture.

Disinvestment or privatisation of public sector is one more recommendation, including the revising of water rates and electricity charges, that the NAP made to raise the money for agricultural development. In fact there are 70 public sector enterprises in Karnataka of which 47 are earning profits as against 23 enterprises. In addition to this in recent years "13 enterprises had recorded increased profits, nine had reduced profits, 10 enterprises had crossed over from loss to profit, 10 enterprises had increased losses, 15 enterprises had reduced losses, five had crossed over from profit to loss and one had retained the same level of loss". The immediate effect of the disinvestment will be borne by 47 profit-making public enterprises and also the workers, numbering around 16 lakhs, who might be retrenched at any time. In addition to this disinvestment will provide space for the big private corporate sector to take over public enterprises. Further, there is no guarantee that the money so collected from the disinvestment will be chanelised to the agricultural sector.

Towards financing development in agriculture the NAP has also proposed the floating of an exclusive agricultural finance corporation, amalgamating different lending banks with a single window scheme for disbursing loans. Meanwhile the NAP has cautioned peasants that they should not expect any more concessions or subsidies in the matters of interests or loans.

A comprehensive plan for the irrigation is also mooted in which the main thrust is on increasing the irrigation potential from 24 lakh hectares to 49 lakh hectares with an investment to the tune of Rs 10,000 crore in five-eight years. There are proposals to restructure the irrigation department by forming an exclusive irrigation corporation where farmers will have some voice. Both water distribution and collection of water cess will be assigned to private sectors. This obviously increases the water rates on the one hand and rural conflicts on the other. However it will confine rural conflicts especially between water consumers and peasants to rural areas and thereby state governments will not face peasant discontent. On the issue of dry farming areas, the proposal is to extend the benefits of new technology, judicious distribution of water and scientific way of using irrigation water so as to increase the average yield.

The tilt towards privatisation is once again reiterated in matters pertaining to price and market development: support to private sector towards the construction of cold storage, construction of warehouses, relaxing the rules of export and import of goods, air-conditioned warehouses for horticultural products, floriculture, fishing and a separate agro channel to disseminate knowledge about the markets, supply of capital and price movements. However, the NAP has proposed assigning the task of collecting water rates and electricity charges to different peasant organisations on the basis of a commission. On their failure private sector entry is preferred.

The NAP also stresses the need for R and D in agriculture. Although the role of the public sector is not negated, the thrust is in the direction of the private sector. Greater interaction between agricultural universities and industries is envisaged for research and development. However it recommends the retrenching of inefficient staff, without explaining what 'inefficiency' constitutes. And, the NAP has also allowed leasing out land by small and marginal farmers. Further the NAP has also proposed withdrawal of subsidies to fertilisers, canal waters, electricity on the ground that the withdrawal will ultimately make the peasantry depend on organic fertilisers. Further the NAP wants human excreta to become a part of organic manures. Does it mean that the NAP is supporting the system of carrying night soil once again?

Like the central government policy the NAP also has laid special stress on the horticulture, floriculture and dairy farming. In the former case the policy "will be to identify the horticultural crops suitable for different agro-climatic regions and provide for quality planting materials, supply of technical know-how, arranging the credit facilities and creating infrastructure for organised market and export facilities." Here also the tilt towards privatisation is visible: encouraging the private nurseries, establishment of tissue culture laboratories under private sector, permitting companies to lease in land to the extent of 56 acres for the purpose of horticulture, permitting the private sector to grow palm trees in 20,000 hectares and finally protecting the silk growers against imports and "any attempts of dumping by foreign suppliers". Adding to this the NAP is in favour of developing as well as exploiting aquaculture which has been brought under the purview of agriculture after the amendments to Land Reforms Act. In this context the policy's emphasis on shrimp culture has serious consequences especially in the 25,000-hectare coastal belt of Karnataka known for small holdings and mangroves in the rivers. There is a danger that the shrimp culture, while bringing huge profits to the exporters, will deprive the small holders their holdings, and that salinity of water in the agricultural fields will destroy the fertility of the lands forever. The destruction of the mangroves will also affect the fish breeding in the river belt.

The thrust towards privatisation is also visible in the recommendations for starting special buses for the purpose of transporting agricultural produce. Nonetheless there are some recommendations which favour the poor and other categories, the outcome of such recommendations largely depends upon the sincerity and the strength of the state. For example, proposals like effective implementation of Minimum Wages Act limiting the benefits of public distribution to the poor, organising the rural poor and constructing low cost houses for the poor need a strong political will.

Land Reforms Amendment Act

The Karnataka government is very clear in its statement of objects and reasons that the boost to industries based on aquaculture, floriculture, horticulture and the housing industry necessitated the amendments to Land Reforms Act. These amendments are in contravention of the National Policy on Land Reforms. The state government has implemented the amendments without referring or waiting for the president's consent.

To begin with the amendment has added a new dimension to the definition of

agriculture. Earlier the Karnataka Reforms Act, 1961 had included six items in the definition: "horticulture, the raising of crops, grass or garden produce, dairy farming, poultry farming, breeding of livestocks and grazing". By adding 'aquaculture' in the definition shrimp culture in the coastal belt has been given support. To support the latter, the section 5 clause 2 of the Land Reforms Act was suitably amended. This clause although prohibited leasing out land to anyone except, "a tenancy created by a soldier, or a seaman if such tenancy is created while he is serving as a soldier or as a seaman or within three months before he became a soldier or seaman", however, allowed leasing out land "for aquaculture for a period not exceeding 20 years" There is no limit or ceiling of land prescribed for aquaculture. Any land, mainly in the coastal belt, whether used for agriculture or not can be taken over for aquaculture. In fact, a recent report of NEER has clearly stated that villages in the district of Uttara Kannada are facing a severe threat due to the conversion of lands into aquaculture and that coastal aquaculture has resulted in the destruction of mangroves.

The second important amendment relates to the fragmentation of lands. Section 61 of 1961 Land Reforms Act had in fact prohibited transfer of lands by sale, gift, exchange, lease or assignment including the fragmentation of land for any purposes, be it for housing or industrial sector. Knowing very well that the fragmentation will ultimately displace or de-peasantise the peasantry, this section substitutes a provision in section 77, which dealt with granting of government lands. With this the government has a free hand to dispose of lands to scheduled castes, scheduled tribes, landless agricultural labourers, ex-military personnel and "other persons residing in the villages". Although the 1961 act ensured that the preference of the state government, while disposing of lands, should be in the order of "tenants, subtenants and other persons who had cultivated the lands", there is no guarantee that the same will be followed by the state government. This provision might go the way of Rajasthan Land Reforms Act, where the land losers were given lands in far-off and distant places, leading to cultural crises and conflicts.

Adding to this the section 63 of the Land Reforms Act pertaining to land ceilings is also amended to pave the way for 'corporate landlordism' in the countryside. This section has also brought back the concept of 'tenancy' once again to the centre-stage. In fact, earlier the Land Reforms Amendment Act of 1974 had reduced the land ceilings to 10 standard units from 27 standard units (1 unit = 1 acre of irrigated land with two crops or 5.4 acres of dry land). The present amendment has enhanced the ceiling to 40 units or 40 acres of irrigated land or 216 acres of dry land. Since the concept of 'standard family' (five members) has been unaltered, the acquisition might go up to 200 acres of irrigated land or 1,056.4 acres of dry land respectively. However, the amendment to section 79 A will decisively tilt the rural power structure. This amendment gives scope for anyone who has the income of not less than Rs 2 lakh to buy agricultural land. This has far-reacing consequences: alienation of lands from agriculturist to non-agriculturist, re-emergence of 'gentleman farmers', creation of farm houses by the industrialist/capitalists, and finally creating 'corporate landlordism' in the countryside.

However, the most important aspect of the Land Reforms Amendment Act relates to section 109. This has exempted certain lands from the purview of alienation and that, it has prescribed certain limits of lands for different purposes. For the industrial development the Land Reforms Amendment Act has fixed 20 units (120 acres of dry land or 20 acres of irrigated land with two crops); educational institutes four units or 21.6 acres of dry land, places of worship one unit or 5.4 acres of dry land; housing project the extent of land is limited to 40 units of dry land and for horticulture 20 units or 108 acres of dry land respectively. However, the insertion of the subsection 1A has defeated the very purpose of ceilings for these categories. It has given the government "a free hand to exempt to any extent land for any specific purpose". Since the 'specific purpose' is ambiguous, anyone who has the capacity to influence the government or the party in power including the multinationals and NRIs can get over the prescribed land ceilings.

There is no doubt that these two policy measures will ultimately benefit the big industrialists, capitalists, multinationals and create 'corporate landlordism' in the countryside. At the same time the consequences of policy measures are far-reaching: de-peasantisation, displacement, in nearing deprivation, sharpening of poverty, urban exodus, cultural crises and cultural suppression, and perpetual bondedness to western capitalism. We can envisage a divided Karnataka in the years to come, sharply divided on the lines of prosperity and poverty. In other words a situation of post-industrial society — development without absorption — can be contemplated in Karnataka which is yet to reach the stage of 'take-off'. This would be the paradox of a developing society as well.

Global Political and Economic Security
Wishes and Horse

Manu N Kulkarni

Despite the good intentions of the Commission of Global Governance to promote just global conditions for political and economic security, questions regarding enforcement of its decisions remain unanswered.

THE present world is characterised by natural and man-made disasters, insecurity, political unrest, increasing poverty, migrations, environmental degradation and what have you. Red Cross data indicate that a significant natural disaster occurs in the world on average once a week. Every three weeks, on average, there is a disaster which exceeds the response capacities of the country afflicted.[1] The World Bank has estimated current global losses from natural disasters alone at an average of 2,50,000 deaths and at least $ 4 billion in damage per year. The UNFPA has estimated that with the present rate of population increase, every day there are also 2,50,000 more human beings needing land, food, fuel and shelter. The number of the absolute poor have increased from some 800 million in the 1970s to about 1.2 billion and are projected to rise to 2 billion over the next decade. FAO estimates that by the year 2000 over 2 billion Asians will either be without wood fuel or will be consuming more fuel than can be replenished. Large-scale human movements and even conflicts may increasingly be triggered by the scarcity of water. Modern weapons technology has blurred the distinction between conventional and mass-destruction arms. With the modern weaponry accessible even to a low income country, civil war can quickly devastate its weak infrastructure and thus affect its population.

The migrant worker exodus in the Gulf crisis included 5,00,000 Egyptians, over 3,00,000 Yemenis, 1,00,000 Bangladeshis (who had been remitting $ 100 Million per annum), 2,00,000 Indians (remitting 15 per cent of the Kerala state economy), and 1,00,000 Sri Lankans ($ 100 million per annum).[2] UNHCR estimated that in 1991 there were 17 million refugees and if we add to this another estimated 24 million displaced persons, who do not currently fall under refugee category, the number is soaring. The current global aggregate of 41 million uprooted exceeds the whole population of Spain or Zaire.

Against such a background the world social summit, at Copenhagen, deliberated, perhaps without any conclusions, to come to the grips of these ghastly issues. The summit had basically three themes on which to get the consensus of the world leaders, viz, poverty eradication, employment and social exclusiveness. There was also a parallel NGO forum to deliberate on these and other issues like participation of people in the civil society and what NGOs can do to tackle the burning issues affecting the world. But the most important deliberations which missed the attention of the media and the NGOs was the nature of the forthcoming world governance for tackling the worst aspects of world degradation and poverty, how to ensure that type of governance, what instruments are needed for its functioning and what reform or restructuring of the UN system, if at all, is needed in the coming years, to tackle these global issues.

Commission on Global Governance

The commission on global governance (CGG) constituted in 1992 released its report much earlier but was discussed in the NGO forum of the world social summit thanks to the excellent initiative of the UN association of Denmark which also translated the commission report into Danish to provoke wider debate and discussion in the summit.[3] The CGG was the last in the series of global initiatives taken up in the past by well meaning 'wise men' and has coincided with the 50th anniversary of the UN. There have been in the past five major initiatives, viz, (1) Independent Commission on International Development Issues, Willy Brandt, 1980, (2) Independent Commission on Disarmament and Security, Olof Palme, 1982, (3) World Commission on Environment and Development, Gro Harlem Brundtland, 1987, (4) Independent Commission on International Humanitarian Issues, 1988, Sadrudin Aga Khan, (5) South Commission, Julius Nyerere, 1990. To mark the 50th anniversary of the UN, several efforts are underway to think on reforming and restructuring the UN and what can be done to Brettonwoods institutions like IMF and the World Bank, which are drifting away from the UN and establishing their own 'turfs' unconcerned with the world public opinion against both their style and substance of functioning. The notable work in this direction which this author has come across is that of the Ford Foundation-Daghammarskjold series of reports on reforming the UN.[4]

At the outset Shridatt Ramphal, the co-chairman of the CGG, who chaired the plenary session in the NGO forum, said that global governance does not mean global government and traditionally global governance has been viewed primarily as intergovernmental relationships. "Today it must be understood that governance involves not only governments and intergovernmental institutions but also non-governmental organisations, citizen's movements, multinational corporations, global capital market and the global mass media. States and governments remain primary actors but they do not bear the whole burden of governance. Likewise the UN must play a vital and central role but it cannot do all the work of governance." "A new world order must be organised around the notion of governance of diversity, not uniformity, of governance through democracy not dominion, of governance at all levels within society and not just from above. By definition global governance implies a decentralised system built on the foundations of a common set of values."[5]

According to the CGG the foremost of these values must include the duty of care for one's neighbour. In a neighbourhood all are neighbours. In our global neighbourhood, therefore, our duty of care is owed to all who share the planet. The CGG has emphasised the following rights and responsibilities for a successful world governance. Rights, a secure life, equitable treatment, opportunity to earn a fair living and provide for own welfare, definition and preservation of our differences through peaceful means, participation in governance at all levels, free and fair petition for redress of gross injustices, equal access to information and equal access to the global commons like sea, sky and the planet earth. Responsibilities: to contribute to the common good, consider the impact of our actions on the security and welfare of others, promote equity, include gender equity, protect the interests of future generations by pursuing sustainable development and safeguarding the global commons, preserve the humanity's cultural and intellectual heritage, be active participants in governance and work to eliminate corruption. Security of state and its people has emerged as the most difficult task to handle by the present UN system which has not shown its effectiveness in identifying, anticipating and resolving conflicts before the use of force becomes necessary. At present the UN intervention is used simply as a cover for the intervention of major powers. In Somalia even before the issue was discussed in the UN, one million people were dead. The war torn regions and states have suffered much more in the post-conflict stage, than in the pre-conflict days. Landmines are the worst landmarks of post-war conflicts. It is estimated that 100 million landmines have been planted in more than 60 countries and another 100 million are stockpiled for sale and use.[6] How will the world governance change this? The CGG says, "To improve global capacity to prevent

the world community to situations that could lead to humanitarian tragedies unless timely preventive action is taken. NGOs and grass roots organisations in the field are often in the best position to alert the international community to potential conflict situation, but have no channels through which to activate international attention. We propose that a Right of Petition should be made available to international civil society to bring to the UN's attention situations that imperil people's security. A Council for Petitions should be established within the UN system composed of five to seven independent persons, to entertain petitions by non-state actors" (*CGG Report*, p 24).

State actors have failed to resolve and prevent civil and ethnic conflicts because states always *ipso facto* defend their actions. Hence, a third party through the petitions, like our Indian public interest petition, can always throw the light. One can recall here the individual petitions filed by people like Archbishop Tutu of South Africa in different world forums against White regime in South Africa and who played a significant role in the abolition of apartheid. Right of petition is not to replace the UN but to strengthen the UN's initiative. At present the UN is bankrupt both in terms of soldiers and resources to prevent and handle conflicts/ civil wars/emergencies. Ford-Dag Hammarskjold Foundation's study by Urquhart and Childers have pleaded for a rapid-response emergency fund of $ 50 million. Chartering only one large transport aircraft, for example, can cost one million dollars a month before fuel and landing cost. The CGG has suggested a UN volunteer force that could be deployed at an early stage of civil strife. But the states would not accept UN force at an early stage. Wars and conflicts arise due to fear and to protect one's own territory states build up arms/weapons. World total military expenditure was $ 815 billion in 1992 but the UN peace keeping expenditure was just $ 1.9 billion. The world global military spending also declined between 1987 and 1994 at an estimated average annual rate of 3.6 per cent but nobody knows where the cumulative peace dividend of nearly $ 935 billion went away.' Defence is a highly secretive business and even the most professional NGOs have no access to this information. CGG has, unfortunately, not thrown any light on how the peace dividend can be ensured and how the money saved can be made known to the people at large in the world community?

Another serious issue is that of bringing to book and punishing those despots, military and civil rulers who conspire and perpetrate the killings of innocent men, women and children, during civil unrest and inter-regional wars. The UN war crimes tribunal at The Hague – the first big international effort to pass judgment on man's savagery 46 – has records of some 150 mass graves in ex-Yugoslavia, each holding about 350 corpses. The tribunal has 65,000 pages of documents plus 300 hours of video tapes all computerised on CD-ROM (*The Economist*, March 11, 1995, p 19). The UN is now in the process of setting up a second tribunal to deal with the slaughter in Rwanda and is headed by Richard Goldstone, a distinguished judge of South Africa. But The Hague tribunal lacks political support to go ahead with prosecutions. No long lasting reconciliation between enemies can come about without a proper accounting of war crimes. Peace has to be built upon truth. Such a process re-establishes confidence in the rule of law. If such tribunals are to become a part of international ethic, governments must provide something better than their current lip-service. Many would now accept that to already existing offences, such as shooting military prisoners, there should be added the concept of crimes against humanity and the mass murder of civilians. Unfortunately, the CGG has not come out with any suggestions on trying war criminals, except to suggest the setting up of an international criminal court. In particular, whether the right of petition includes the right of any citizen affected by the war crimes, to ask for prosecution of the guilty? There cannot be any world governance without punishing the war criminals of the world. It was surprising that in the NGO forum, despite the presence of many from Rwanda NGOs, none raised their voice against the human killings.

Economic Security Council

Once there is peace and physical security in the world, people look for economic and livelihood security and planetary security. The interest of future generations are today placed at risk by the overuse of common environmental assets – the global commons like atmosphere, outer space, oceans beyond national jurisdictions and related environmental and life support systems that underpin everyday human life. Poverty issues cannot be separated from these environmental issues. The CGG has suggested that the UN trusteeship council would be ideal to hold global commons trust, now that the council is no more in charge of trust territories. The CGG wants the council as a global environmental custodian acting as an umbrella for the administration of environmental treaties.

The present UN economic and social council (ECOSOC) has become in the words of Ramphalla 'talk-shop' and some more UN agencies like the UNIDO have lost their utility and have to be closed down. It was pathetic to see how in the NGO forum in Copenhagen some UNIDO officials were trying to lobby, with the members of CGG, not to recommend such a step. The CGG sharing of resources of the world and directing pro-people policy changes across the world cannot be left to a few brains in the World Bank/IMF who have demeaned themselves in the eyes of the majority of the NGOs and the governments of the world. There is no culture of co-ordination between the UN and these Brettonwood institutions.

The World Bank's operational track record should also form part of review about its future place in the UN system. "In an internal assessment of 1,800 current Bank projects in 131 countries involving loans totalling $ 138 billion, it was reported that 37.5 per cent of projects completed in 1991 were deemed failures."[8] In the words of Childers and Urquhart, "It is extremely difficult to envisage the scope of reforms in the World Bank that would make it a compatible and appropriate specialised agency of the UN system. Beyond austerity air travel not only the Bank's present lavish meeting style, but staff remuneration would have to be brought into line with the UN's common system. The heavy-handedness of Bank loan approaches, with staff arriving in developing country capitals with projects already designed in Washington DC, is equally incompatible with the principles of respect, co-operation and partnership on which all UN system development activities are based."

The proposed economic security council as an apex economic body within the UN family would have the same standing as the security council of the UN. The CGG rightly says, "The group of Seven, a self-constituted club of the nominally richest countries, formed to look after their own rather than global interests, cannot claim to be a sufficiently representative forum to take on this responsibility". ECSOC has failed to influence the G-7 and the developing countries are desperately dependent on the west for money, skills, technology and information. World economies cannot survive in this lopsided fashion and hence, much discussion was centred around the resources for social and economic development of the world as a whole in the NGO forum. At present, resources of the UN are fast depleting. When the UN was founded only one method of financing was envisaged, viz, a percentage of the budget allocated to each member state calculated on the basis of 10-year average of its gross domestic product with downward adjustments for low per capita income and high foreign debt. It was based on the principle of capacity to pay. At present, the US share has been adjusted at 25 per cent and the contributions of the poorest countries cannot fall below 0.01 per cent. Based on 25 per cent of UN budget the US is paying $ 310 million. France 6 per cent, UK 5 per cent and India 0.36 per cent. All UN contributions have to be paid in US dollars. Impediments to earning

and monetary system makes this more difficult.

Any reforms of the UN towards world governance has to set right the principles of contribution and make it more equitable. If it is strictly on per capita levels of national income then many oil producing countries would pay more than what India is paying at present. But the more vital issue is that of raising resources for poverty eradication, employment generation and social integration of the developing and least developed countries. Several suggestions for global resource mobilisation which were floating around in the social summit were UN surcharge on (1) all arms sales and sale of land mines produced after a certain date (There is now a UN arms register but we do not know whether any country is registering the arms in that register); (2) surcharge on the use of global commons like sea lanes, international airspace, etc; (3) UN levy on international air and sea travel; (4) One day collection charge named as UN communication day, when all postage charges and telephone calls would carry levies accruing to the UN.

The hotly debated resource issue was that of Tobin tax, named after James Tobin, Nobel laureate in economics, who suggested a tax on foreign exchange transactions 16 years back. The present estimated forex transactions around the world per day is more than $ 1 trillion. "The questionable nature and composition of the capital flowing through financial markets arise from the fact that only about 5 per cent is for the financing of trade and less than 15 per cent for investment. *The Wall Street Journal* (September 18, 1992) has ventured to state that less than 10 per cent of this staggering sum has anything to do with trade in goods and services. It would seem that the remaining 80+ per cent of the ebb and flow is attributable to speculative and/or money laundering motives that are in large measure beyond the bounds of serving any beneficient social purpose and which revalidates Keynes's references to the casino society. Capital movements have only a weak tenuous connection to societal objectives; major reference as to whether the projects being financed are or are not productive in the broadest social sense of that term".[9]

	Taxable Foreign Exchange 1.0 Per Cent Tax	Annual Tax Receipts 0.5 Per Cent Tax ($ 10.9)
$ 1 trillion x 240 trading days less 20 per cent tax exempts = $ 192 trillion less 20 per cent evasion = $ 144 trillion less 50 per cent reduction of trading volume = $ 72 trillion effective tax base	720	360
50 per cent kept by collecting govts	360	180
Distributed to the UN,IMF, World Bank	360	180

David Felix's 'back of the envelope' calculations are illustrative of the astonishingly high revenue potential of a globalised Tobin tax (*Futures*, March 1995, p 205).

Now the politics of Tobin tax is whether the G-7 countries will have the political guts to initiate such tax measures given the power of multinational investment banks and several transnational companies (TNCs). The 500 biggest TNCs account for 30 per cent of global production, 70 per cent of global merchandise trade and 80 per cent of international investment. The World Bank guidelines on foreign direct investment are insufficient because they discuss only the rights of investors, not their obligations. The south needs investments which neither enrich investors at the expense of the poor nor create dependency and exploit natural resources. The first step is to have a code of conduct for TNCs.

The final important issue which received attention of the participants in the NGO forum was that of leadership of the UN and those who make up the world governance. In the words of CGG, "Whatever the dimensions of global governance, however renewed and enlarged its machinery, whatever values give it content, the quality of global governance depends ultimately on leadership. At national, regional and international levels within communities and in international organisations, in governments and non-governmental bodies the world needs credible and sustained leadership" (*CGG Report*, p 45). But how will we get such a leadership? The leadership issue within UN and its sister agencies is itself beset with innumerable problems. One of the most vocal criticisms of the UN is the size and quality of its bureaucratic leadership. But the reality is different. In the words of Erskine Childers, "The entire UN staff – professional, general service, spread over in New York, Geneva, Vienna, etc, is now about 9,000, which is less than the civil service of the city of Winnipeg in Canada. It is less than the staff of the international advertising firm of Saatchi and Saatchi. The total regular and non-permanent staff of the entire UN – excluding World Bank and IMF – and the contributed peace keepers is about 51,500. That is less than the total governmental staff in the state of Wyoming; it is less than the civil service of the city of Stockholm, it is less than the district health staff of the principality of Wales in the UK".[10] Article 100.2 of the UN charter says, "Each member of the UN undertakes to respect the exclusively international character of the responsibilities of the secretary-general and the staff and not to seek to influence them in the discharge of their responsibilities". But the very fact that the candidate must first be acceptable to five permanent members of the security council has fundamentally weakened respect for these charter provisions from the outset. Once the top leadership post in the UN is politicised, all posts down the line get politicised.

Any move towards world governance, in the words of Shridatt Ramphal, has to be within the broad framework of the present UN charter. The UN, according to him, is like a sun; we cannot avoid it, we have to live with it. But the question is, can the type of world governance that is envisaged or dreamt by the CGG make the life of the poor and the marginalised on this earth a happy place to live in? The entire discussion on world governance in the NGO forum at Copenhagen reverberated the warning issued as early as 1969 by U Thant, the former secretary-general, "I do not wish to seem overdramatic but I can only conclude from the information that is available to me as secretary-general that the members of the UN have perhaps ten years left in which to subordinate their ancient quarrels and launch a global partnership to curb the arms race, to improve the human environment, to defuse the population explosion and to supply the required momentum to development efforts. If such a global partnership is not forged within the next decade then I very much fear that the problems I have mentioned will have reached such staggering proportions that they will be beyond our capacity to control".

Notes

[These are the personal views of the author and not of his organisation.]

1 Nordic UN Project, *Responding to Emergencies*, report no 14 Stockholm, 1990, p 13

2 Inter Alia, Overseas Development Institute, Briefing Paper, London, March 1991.

3 *Our Global Neighbourhood – The Basic Vision*, The Commission on Global Governance, P O Box 184 CH 1211 Geneva 28, 1995.

4 *Development Dialogue*, 1994:1, Uppsala, Sweden

5 Op cit, p 7.

6 *UNICEF Annual Report*, New York, 1994, p 37.

7 Manu N Kulkarni, 'World Summit on Social Development – Choice of Agenda Issues', *EPW*, September 24, 1994.

8 The assessment was led by Willi Wapenhams as chairman of a portfolio management task force appointed by the Bank president Lewis Preston in February 1992.

9 Morris Miller, 'Where Is Globalisation Taking Us - Why We Need a New Bretton Woods', *Futures*, Vol 27, No 2, March 1995, Special Issue. *The UN at Fifty: Policy and Financing Alternatives*, Harlan Cleveland et al (eds), Butterworth-Heinemann released in the World Summit, Copenhagen, March 6, 1995

10 E Childers, 'Financing the UN', *Futures*, Vol 27, No 2, March 1995, p 163

Panchayati Raj, 73rd Constitutional Amendment and Women

Bidyut Mohanty

If reservations for women in panchayati raj institutions are to lead to their empowerment in real terms, social, economic and political conditions which facilitate and encourage their participation need to be created.

IN April 1993, the 73rd (Constitution Amendment) Act came into force and accordingly, all the states have amended their laws relating to local self-government. Since it is for the first time in the political history of India that one-third of the total seats in its local self-government institutions have been statutorily reserved for women, the legislation has several important implications for the empowerment of women. It has created a silent revolution in the country. However, in our view, the reservation itself can only be regarded as the first step in this direction. It is necessary to create proper social, economic and also political conditions to enable women to participate effectively in the local government institutions without endangering the positive values of the prevailing family systems.

In 1959, the Balwantrai Mehta Committee suggested that an agency should be set up at the village level which would not only represent the interests of the village community but would also take up the development programmes of the government at its level. The gram panchayat which was to constitute this agency was, therefore, perceived as an implementing agency of the government in a specific, namely, developmental sphere. In 1977, the Asoka Mehta Committee recommended a fundamental change in this concept of panchayati raj. It asked for transformation of the panchayat from an implementing agency to a political institution (George Mathew, *Status of Panchayati Raj in India*, Concept, 1995). In order to implement this recommendation the need for constitutional amendment was felt. It, however, took more than a decade for the first steps in this direction to be taken in the form of the 64th Constitution Amendment Bill which was defeated in Rajya Sabha. In 1992, another legislation, the 73rd Amendment Bill was introduced in parliament which adopted it in the same year. It became an act in the following year. The important features of this act are: (1) Panchayats will be considered political institutions in a truly decentralised structure. (2) The gram sabha shall be recognised as the life line of the panchayats. The voters of the village/villages will constitute its members. The panchayat shall be accountable to the gram sabha. (3) There will be direct election in all the three tiers of governance: gram panchayat at the village level, taluka or block panchayat at the intermediate level and zilla panchayat or parishad at the district level. (4) Insofar as the empowerment of women is concerned the act has provided that at least one-third of the total seats at all levels shall be reserved for women of whom one-third shall be from the scheduled castes and scheduled tribes. In this context it is important to note that at least one-third of the total posts of the office-bearers at all levels will also be reserved for the women. The Orissa government has made it mandatory that wherever the chairperson is a male, the vice-chairperson's post would be reserved for a woman. Before the 73rd Amendment, women used to be co-opted into the panchayats. (5) Each panchayat will have a tenure of five years and in case it is dissolved by the state government fresh election will be held within a period of six months. (6) The election to local bodies has to be conducted regularly. (7) There will be a separate election commission and also a finance commission for panchayats in every state. (8) It is obligatory on the part of the centre as well as the state to provide adequate funds for the panchayats to enable them to function properly. In addition, the panchayats will have their own fund raising capacity on the basis of the local resources. (9) Some states like Rajasthan, Haryana and Orissa have debarred the candidates having more than two children from contesting in the election with a view to controlling population growth. However, given the low average age of marriage of girls (19), they would have crossed the two-child norm by the time they contest for elections. Hence it will be difficult for the states to get suitable women candidates for the panchayat election. (10) Some state acts like those of Bihar, Himachal Pradesh, Uttar Pradesh, Haryana and the earlier act of Karnataka have the provision of nyaya panchayat to settle the disputes at all the three levels.

The new act does not make it obligatory for states to provide for nyaya panchayats to solve local disputes. Secondly, although the objective of the act is to build the panchayat as an effective decentralised political institution at the grass roots level, the division of functions in its 11th schedule makes it in reality, essentially an implementing agency for developmental activities. In other words the resource raising capacity of the panchayats are limited. For example, the 'sarpanches' and chairpersons of the panchayats are supposed to implement the schemes under Jawahar Rozgar Yojana, Indira Awas Yojana, etc. In the case of Kerala, for instance, the panchayats have to supervise the tutorial colleges! Nonetheless, the act has ushered in a new era in which the villagers can at least try to decide their own destiny.

Factors Affecting Women's Empowerment

Indian culture and social ethos have to a large extent been influenced by a patriarchal value system. There are, of course, regional variations – in the northern states the prevailing attitude is more discriminatory against women than in the southern states. But here again, there are notable exceptions as can be seen from widespread female infanticide in certain parts of Tamil Nadu, particularly Salem district. Even dowry taking has registered an increase in certain parts of another southern state, Kerala, which is considered to be a model state insofar as the status of women in terms of literacy and access to health care facilities is concerned. As a result of these deeply entrenched social attitudes and practices, women by and large have not been independent decision-makers in the country. Their 'decisions' in most cases have been influenced by the wishes and dictates of the male family members. They are guided by a patriarchal social system and, therefore are discriminated against in terms of access to food and health care. Keeping this in view, the *World Development Report on Population 1994* has accorded to women the central place in the population policy. In terms of access to food, a lot has been written on the inter-personal requirement of food (L C Chen, 'Where Have All the Women Gone? Insights from Bangladesh', *EPW*, 1982). But it is also true that in a crisis situation, women do not get their legitimate share of food because in the preference scale of the 'karta', who distributes food to all the members of the family, they occupy a lower place and hence can get only a smaller share (Paul R Greenough, *Prosperity and Misery in Modern Bengal,*

Table 1: Women Representation in Lok Sabha 1952-1991

Terms of Lok Sabha	Percentage of Females to Total Seats	Terms of Lok Sabha	Percentage of Females to Total Seats
1952-57	2.8	1977-80	3.5
1957-62	3.6	1980-84	5.3
1962-67	6.0	1984-89	7.7
1967-71	6.0	1989-91	4.4
1971-77	3.8	1991-	7.2

Source: E K Santha (1995) 'Participation of Women in Panchayati Raj: A Status Report' submitted to National Commission for Women, through Institute of Social Sciences.

OUP, New York, 1982). Sometimes, women of their own volition do not take nutritious food because of the wrong perception about their position and requirement in the traditional cultural and social set up.

With regard to health care, discrimination against females is also reflected in the type and relative frequency in utilising the same. The data show males receive better medical treatment than females in all age groups but this is more prominent in case of children (see Jocelin Kynch and A K Sen, 'Indian Women: Well-Being and Survival', *Cambridge Journal of Economics*, Vol VII: 3 and 4, 1983; Dasgupta, Monica, 'Selective Discrimination against Female Children', *Population and Development Review*, Vol 13:1, 1987). The author for example has shown that even in Punjab the second girl child is often neglected in terms of medicare.

This kind of discrimination against women cuts across castes and classes. Even though there are monetary transactions among the low caste women which are kept hidden from the male family members, these do not go very far in enhancing their social power though they are slightly better placed in this respect than the lower middle class women. With regard to health care, only the women in Kerala have access to any worthwhile medical facilities, partly because of their awareness. Recently, the women of Punjab too are reported to have acquired a better health status. Could this be because a large number of men in the armed forces come from the state and their supreme sacrifice in military operations has given the war widows a value and status in the society? If this indeed is the case, it, apart from pointing to a sad state of affairs, is a phenomenon which may not last for long. That women of India in general and girl child, in particular, are discriminated against has been reflected in statistical terms. According to the Census of 1991, the sex ratio (females per thousand males) is 929 and has been declining since 1901, with a marginal increase in 1981.

In 50 per cent of the states the sex ratio is below the national average. With regard to women literacy rate, only 39 per cent of the total female population above seven years of age are literate. In some of the northern states female literacy rate is much below the national average. For example, the female literacy rate of rural Rajasthan is only 12 (Census of India 1991). Insofar as the school enrolment is concerned, there is a huge gap between boys and girls. Of course, recently the life expectancy at birth of females has exceeded marginally to that of males. This can be explained in terms of more females in the age group of 60 and above compared to males. However, in the younger age groups the female mortality rate has been higher than that of males leading thereby to "a missing 100 million women" in successive censuses.

But the most disturbing point regarding women is that the visible and invisible violence against them is increasing. The crudest form of violence is killing girl children before they are even born. This is prevalent even in the metropolitan cities of Bombay and Delhi where aborting of the female foetus is widely resorted to. Persons in small towns and villages also eliminate the girl child because of poverty in some cases but mostly because of bias. In many cases, it is consumerism and commodification of women which has led to this kind of situation. Even today, female babies are killed by the midwives in Bihar on payment of Rs 60 and a saree. This is done not only among members of the high castes but also those of the lower castes.

Economically, women possess weak bargaining power, except perhaps in some parts of the north-east and Kerala. Agarwal (1994) who has examined extensive ethnographic evidence points out that south Asian women not only do not own land but also do not control it in spite of having progressive legislations. Even in matrilineal societies the women inherit the landed property but have very little control over the management of the same. According to the Census of India 1991, only 29 per cent of the women are recorded as working in an economically gainful way. At least 90 per cent of them work in the primary sector. In the industrial sector, they predominate in the household industries characterised by seasonality, uncertainty and low skill formation. In the tertiary sector, women get employment in 'othe services' including domestic service (M K Premi and S Raju, *Gender Issues in Workforce Participation in 1991 Census of India*, Report to UNIFEM, 1994; Bidyut Mohanty, *Women and Work: An Analysis of 1991 Census Data on Orissa*, Report to UNIFEM, 1994). According to the Eighth Five-Year Plan, around 30 per cent of the households in India are woman-headed households and are below the poverty line. Lack of resources could make women a less effective group insofar as resource allocation is concerned.

Since the beginning of the planned development, women have been viewed as a deprived section requiring welfare measure. It was only in 1975 that a UN Declaration compelled the national government to shift the emphasis of its women's programmes from welfare to development. More attention was given to health, education and employment. In 1985, after the Women's World Congress at Nairobi, a national document was prepared laying down forward-looking strategies for women's development. In this document the question of their political participation was highlighted and it was recommended that 35 per cent of the total seats should be reserved for women.

The document is known as the National Perspective Plan (1988). It was also recommended that some posts should be reserved for women at the block and village level bureaucracy. On the economic front a number of income generating schemes targeting women such as Development of Women and Child in Rural Areas (DWCRA) were introduced. In addition, provisions were also made to keep certain proportion of women as beneficiaries in all the developmental schemes like IRDP, JRY, NRY, TRYSEM. Thus, we find a host of national and international events coupled with the complex social and economic factors influencing the decisions as regards the status of women, culminating in the reservation of 33.3 per cent of the total seats for them at the panchayat level.

Since women do not have much social and economic power, they are also unable to exercise any political power. Evidence from parliament, state legislatures and trade unions clearly shows that the women's representation in them is insignificant. In political parties, important posts are also not given to women. In fact, the New Delhi Document on Women in Development (1985) was aware of this problem and remarked "...despite the rapid growth of informal political activity by women, their role in the formal political structure had virtually remained unchanged". After a decade, not much perceptible change has taken place on the national scene except the 73rd Amendment of the Constitution. If it is implemented, around one million women would come to the national politics from both panchayats and municipalities. But not all states have been enthusiastic about holding elections to the local self-government bodies. Further, a comparative study of all the state acts reveals that there is less scope for a decentralised process of decision-making than before.

Many people feel that even though one third of the posts have been reserved for women, there may not be enough candidates. But experience in several states is to the contrary. For instance, in the village panchayat elections in Karnataka held in December 1993, 43.4 per cent seats went to women. In West Bengal also, they were more in number than the reserved quota. Moreover full 20 years have passed since the new phase of the women's movement started in this country and a number of women activists have come up who car take active part in the political process. However, to draw them into this process, a dialogue has to be initiated between the various women's organisations and political parties. The need of the hour, therefore, is to bring women to the centre-stage of the political process and for this, besides the government,

TABLE 2: PERCENTAGE OF WOMEN SARPANCHES

Name of the States	Percentage of Women Sarpanches to Total
Rajasthan	33.36
West Bengal	35.23
Tripura	33.37
Haryana	33.33
Madhya Pradesh	35.72

Source: India Today, May 15, 1995

voluntary organisations, intellectuals and women activists also have to come together.

There are several other factors which explain low participation of women in the political process. These factors are criminalisation and factionalisation of politics, emergence of fundamentalism at a macro level and lack of awareness regarding legal and economic aspects of the society, which prevent women from taking part in the public sphere. This indicates that the reservation of seats is a necessary but not sufficient condition for women to take part in the political process in an effective manner. At the same time, it has to be admitted that the new political process will not present a very unfamiliar situation because the developmental schemes have been able to absorb some of the women in the organised sector. For example, many more women are working in blocks, schools and banks than before. And their family members have already adapted themselves to this new situation. In addition, different schemes like DWACRA, JRY, TRYSEM and the National Literacy Mission have brought women out of their households and in contact with the outside world.

Need for Reservation of Seats

According to some experts, the reservation of seats for any section in a system may not change it basically. Instead of Mangat Ram, the most influential and corrupt person of a village, Mrs Mangat Ram will assume power and she will be a mere proxy of her husband. In fact, this has been proved in Rajasthan where elections were held recently.

According to S Ramanathan, who has been working on Panchayati Raj politics in Rajasthan, in one panchayat, the jats fielded a consensus woman candidate from their own caste. But this was not liked by the harijans who fielded another woman candidate from their community. The jats tried to persuade the harijans to withdraw their candidate but to no avail. Finally, it became a prestige issue for the jats. Pathram Jat whose wife was a candidate took off his turban and placed it before the harijans! The harijans were put in a dilemma. They withdrew their candidate and were given some compensation money (Uma, 'Challenges and Opportunities: A Study of Women Panchayat Representatives in Karnataka', Institute of Social Studies Trust, Bangalore, 1995). A panchayat in Maharashtra became an all-women panchayat because the gujjar and koli communities were at loggerheads with each other and they decided to have an all-women panchayat. (Madhu Kishwar, 'Social Empowerment and Women', keynote address at National Conference on Women and Panchayati Raj, New Delhi, 1995). The experience is not very different in Karnataka and Orissa either. However, according to Mathew (1994), things changed within two years of the election in Karnataka. The elected women members of zilla parishads in the state had become more vocal and were taking more interest in the functioning of their institutions than earlier.

In spite of this possibility of women representatives emerging as mere proxies in the beginning, there is a need for reservation of seats for them because of the social and economic conditions in which they are placed. We know how women and girl children are discriminated against all over India in varying degrees. Coupled with that is the fact that even the highest political bodies of the country, namely, parliament and state assemblies have not any worthwhile representation of women. Table 1 shows their participation in the Lok Sabha has not come up to even 10 per cent between 1952 and 1991.

A similar picture is evident at the assembly level as well, irrespective of the female literacy rates in the states [Santha 1995]. The trade unions and political parties also did not take any active interest in promoting women's participation in the political process even though the women's movement had started in 1974. So there is definitely a case for reservation of seats for women in political institutions, which however need not continue indefinitely. Along with the reservation of seats, other steps like awareness generation through propaganda, training, media publicity, etc, should be taken up to make it really effective in empowering women.

Implications for Women's Empowerment

So far elections for panchayats have been held in 11 states, namely, Rajasthan, Haryana, Orissa*, West Bengal, Tripura, Madhya Pradesh, Andhra Pradesh, Karnataka, Maharashtra, Punjab and Himachal Pradesh. In some other big states like Tamil Nadu, Bihar and Gujarat the elections are overdue. When all the states have held their elections, around one million women will become part of the political set up. However, the state-level data on women's representation is scanty and lacks uniformity. For example, although zilla parishad elections are due in Orissa, around 25,000 women have already become elected members of its panchayat bodies. Again, in Uttar Pradesh where panchayat elections were held in April, a reported 15,000 women pradhans have been elected. In Tripura which went to polls last year, around 1,894 women were elected conforming to the one-third ratio. Also Tripura has one all-women panchayat in a tribal area. The chairperson of this panchayat who, of course, is a tribal, has promised to remove illiteracy first. Of course, the number of elected representatives will be higher if we take into account the women elected from the general seats. But data on this is not available. According to an official spokesperson, Karnataka had overfulfilled its quota for women and around 43 per cent of the total seats were filled by them. In the case of West Bengal, women constituted 35 per cent of the total elected representatives, (Development Alternatives, 'Women in Panchayati Raj: A Study in West Bengal' at a Seminar on Women in Panchayati Raj: Perspectives from various states, April 27-29, Institute of Social Studies Trust, 1995). We also have some data on the sarpanches (at the lowest level of the panchayats) for some states which is given in Table 2. Evidently all the states have fulfilled the statutory requirement in respect of the number of women in their panchayats and two of them, Madhya Pradesh and West Bengal, have even overshot the target.

Two years have passed since the Constitutional Amendment came into force. Both Karnataka (1987) and Maharashtra (1990) had already held elections before the act's enforcement and mandatory reservation of seats for women under it. According to Mathew, women from the dominant castes, lingayats and vokkaligas, formed 60 per cent of the elected women members at the level of zilla parishad in Karnataka. A similar picture emerged from a primary survey conducted in Orissa. Around 66 per cent of the women elected members in the state are from karans (kayasthas) and khandaits (cultivating castes). In yet another study relating to Orissa, it is revealed that the percentage of non-scheduled castes (57) in the posts of upa-sarpanches is higher than that of scheduled castes (28.6) and scheduled tribes (14.3). But in the ward membership, the lower castes dominated. For example, the percentage of scheduled tribes constituted 45.9 and that of scheduled castes 27.3. In contrast, women from general castes formed 27 per cent.

With regard to the marital status, it is noticed that almost all women elected representatives are married. Also at least 16 per cent of the total women representatives in Orissa are widows. The same phenomenon was revealed in another study done by Mohanty in other parts of Orissa. The West Bengal study by Development Alternative (1995) showed that around 84 per cent of the women panchayat members are married.

The Orissa study by Mahapatra shows that the percentage of the literate women at the sarpanch level is higher than that at the ward membership level. For example, in the former case, it is 86 per cent and in the latter it is only 68 per cent. In the case of Karnataka, surprisingly, we find that only 20 per cent of the women representatives are literate. Of course, Bijapur, to which the figure relates, is a relatively backward district. According to Mathew, women representatives lagged behind their male counterparts insofar as the literacy level is concerned. For instance, 2(per cent of the men are either professionals or post-graduates as against only 5 per cent of the women elected. In contrast to the Karnataka experience , the West Bengal study suggested that all the women elected members were literate. But most of them had not gone beyond the middle school stage. The above micro studies, which are based on small samples are, no doubt, not an adequate mirror of the educational status of

women panchayat members. But they make one point clear that majority of the women elected in the eastern as well as the southern parts of India are not illiterate, except in the backward districts.

With regard to the age composition of the women members, it is to be remembered that Karnataka was the first state which had lowered the voting age to 18 years. According to Mathew, political parties there found it extremely difficult to get candidates in the higher age groups, i e, above 45. They could persuade only the younger women to contest the election. As a result, more of them were inexperienced in politics than men since they entered at a younger age, *vis-a-vis* men. UMA study group also noticed the same trend, namely, that women in the child-bearing age group are coming forward to join politics in spite of domestic responsibilities. Both the studies of Orissa and that of West Bengal confirmed the above trend. The experience of Maharashtra which had conducted the panchayat elections earlier revealed similar features in one of the micro studies of the state (Stree Aadhar Kendra, *Women in Decision-Making: A Study of Women in Gram Panchayats, Maharashtra*, paper at a seminar at ISST 1995).

At this point, mention should be made of the emergence of all-women panchayats. We have nine of them in Maharashtra (Chitra Bhandari, 'All Women Panchayats of Maharashtra' *People's Action*, 8:2 1993), one each in Tripura and West Bengal and nine in Madhya Pradesh. One study group (Aalochana) is conducting an extensive research among the members of the all-women panchayats in Maharashtra. But systematic data is not available as yet. In Tripura, as was noted earlier, the all-women panchayat is located in a predominantly backward village where the entire population consists of scheduled tribes (785) and scheduled castes (592). The panchayat has nine members. The sarpanch, a tribal, is an old woman (80). She has set eradication of illiteracy from the village as her top priority (*The Sentinel*, August 25, 1994). In contrast, the Kultikri Gram Panchayat of West Bengal is located in a general area having some tribal and scheduled caste population. According to a study conducted by a team of the *Indian Express*, March 5, the performance of the women of Kultikri in the sphere of welfare of the village community could be rated as satisfactory. All of the 11 members of this panchayat are young (30) and have not passed even high school. Yet, they have managed government projects involving Rs six lakh. They have tried to utilise the waste land resources by setting up shrimp farms and mango orchards. In this way they have been able to create employment opportunities. According to the study, each and every girl child is attending the school. It is also significant that the women members are less corrupt than their male counterparts. Not much information is available on the Madhya Pradesh all-women panchayats except that some are located in the tribal area.

The all-women panchayats of Maharashtra (see Chitra Bhandari) have become the centre of attraction. These panchayats are located in the following districts: Metikheda (Yavatmal district), Ralegaon and Nimgaon Boghi (Ahmednagar), Vitner (Jalgaon), Salod, Yerandgaon and Nandgaon (Amaravati), Yenora (Wardha), Brahmangarh (Pune). According to the author, the Ralegaon all-women panchayat is working well but the credit for this goes to a male social worker, Nana Hazare, 'father' of Ralegaon Sidhi who has solved the water problem in that area in co-operation with the villagers.

Panchayats like those of Vitner, Metikheda, Yerandgaon, Salod Nandgaon and Yenora are under the influence of the Shetkari Sangathan. But only the panchayat in Vitner termed as Jyotiba Phule village with a population of 2,000, located at foothills near Tapti river has done well. Drinking water here is available through taps and the incidence of alcoholism has declined. Unlike in Ralegaon women's leadership has taken shape here.

Kishwar points out that this village panchayat has implemented 'Laxmi Mukta Scheme' whereby women have been given land. In contrast, in the Brahmangarh panchayat, women came into power because the husbands had migrated to Bombay and the women have stayed in the village. This tradition has been continuing since the 19th century. There are nine women members and all of them have studied up to the seventh standard. The author says that they are 'allowed' to assume power and act accordingly. But whether the male migrants still hold the strings insofar as the important decisions are concerned, Bhandari had not looked into.

Bhandari concludes by saying that even though the women have been elected and have formed panchayats, they have not been empowered except in a few cases. In those cases the personality of the women mattered a lot. The *Indian Express* study has confirmed Bhandari's observation. In places like Ghera, Purander and Bittargaon, women sarpanches have learnt the lesson the hard way. On the other hand, the woman sarpanch of Ralegaon depends entirely on Nana Hazare for taking up any kind of activities.

Medha Kotwal Lela and Sinorcita Gopal Singh who looked at all-women panchayats in Maharashtra for Aalochana felt that women here are working more effectively than the women sarpanches of other panchayats because the former could get encouragement and strength from the fellow women.

Members of all-women panchayats have shifted the developmental priorities of the villages. They could do it because the NGOs are backing them. In Brahmangarh, for example, the members of Lal Nishan party are active among the people. In Metikheda, the Setakahi Sangathan is helping the all-women panchayat. The emergence of all-women panchayats is a unique outcome of the positive discrimination policy. These women are engaged in developmental activities in an active way wherever NGOs are helping them. However, leadership of the elected members is lacking in such cases.

Two years have passed since the amendment bill became law. Yet, elections are not over in all the states. Even major states like Bihar and Tamil Nadu are yet to conduct their elections. The future of the elected women representatives is bristled with many problems because of their social and economic background. Majority of them may remain illiterate, wives or sisters of someone, ignorant of rules and regulations. In addition, they may be dealing with an insensitive bureaucracy. Many of them will be proxy members. As a result of the reservation of the seats now granted, women of both high and low castes would sit together in the same place although, traditionally, they have been barred from sharing a common place. This is likely to create some conflicts. Moreover, the women of the lower castes may not be inclined to go against the wishes of the higher caste women because of their unequal status.

Again, in respect of women's active participation in the political process, the role of the family also needs to be considered. The family, as an institution cutting across the caste and class line as well as regions, allocates power, authority and resources in a biased manner which is not favourable to women and children in general, and girl child, in particular. They are always undeservedly undervalued and their work is invisible. This bias against them is specially evident in north India, except in Himachal Pradesh and Punjab to some extent. Further, women of different ages and castes will take part in village affairs. This may upset the existing pattern of behaviour in the family. The young ones could offend the elders, including husbands. There would be reversal of roles. If the male and female members of the family do not adapt themselves to the new situation, it will face tensions and this age-old institution itself will undergo a drastic change.

Finally, the role of caste panchayats needs to be highlighted. These panchayats consist of the older members of the caste who would like to preserve their caste traditions. Thus, the caste panchayat would not like women to come out publicly and to take part in political meetings since it would go against the tradition. Similarly, the village elders may harass women panchayat members if they raise their voices against social evils such as child marriage and sati.

Given the above background, whether the 73rd Amendment would be able to bring about a significant change in the existing situation leading to political empowerment of women is still an open question. Micro studies available from West Bengal as well as Orissa indicate that the elected women

representatives do not have enough say in the decision-making process. But other studies, from Maharashtra and Karnataka, give a different picture.

The National Perspective Planning for women had envisaged the insensitivity of the male bureaucrats to the gender issue and recommended that 50 per cent of all grass roots functionaries must be women. The Perspective Plan also recommended relaxation of the educational qualification for women along with a short training course for them. Under the present set up, all developmental schemes and allocations of funds for women's welfare are routed through collectors, BDOs and other officials. What is more, the developmental schemes have a household approach with the unit equated with its head who often happens to be a male. Hence, the women of the household get neglected.

Administrators do not also take much interest in the specific problems of women. Of course, over the years a number of schemes specifically for the benefit of women have been devised, but administrators have been giving only lip-service to them. Since the elected women representatives would not immediately be in a position to grasp the significance of the schemes, administrators would have ample opportunity to by-pass them completely. Very often there is no transparency about the decisions. Further, there are not many women officials available nor are all women officers sensitive to the women's problems. Many women officers think that having attained a certain status, they belong to a superior category and can deride village women. Widespread red tapism robs the schemes of their dynamism. For all these reasons, women should be made aware of the deficiencies of the bureaucracy and the bureacrats should be made more sensitive to the needs of women. In sum, it seems that women have to cross many hurdles before becoming effective partners in the decision-making process.

Note

[I am grateful to Rajan for computer assistance and to Satyanarayan for his valuable comments and final editing. However, the author is responsible for the content of the paper.]

* By the time we finished writing this article, the news regarding dissolution of Local Bodies in Orissa was published. The government has resorted to Article 243N for dissolving the panchayats and municipalities under which it is not obliged to hold the election within six months of the dissolution. It is a fatal blow to the political empowerment of women.

A 'Miracle' Really, but Not Divine

Mina Swaminathan

While there have been several analyses of the 'milk miracle' by sociologists and scientists, hardly any attempt has been made to look at the 'organisational' miracle, the tactics and the strategies by which such nationwide orchestration was achieved.

IT can now safely be stated that miracles, like other marketing strategies, succeed on the basis of meticulous planning and organisation, some executive ability and the support of a disciplined workforce. From this point of view, the recent milk miracle' should give us cause to reflect on the underlying hidden elements which contributed to its remarkable success. Most media attention has been focused on the scientific explanations. And these were not hard to locate, many indeed having been aired even on the day of the miracle itself. Beside clarifying the scientific principles behind the phenomenon, some discussion has centred around themes like the gullibility of the public, the tendencies to mass hysteria and mass hypnotism, and the power of rumour. The Indian public, specially its educated middle-class sector, has been soundly berated for the ease with which it falls victim to such miracles'. Some sociologists have also analysed the reasons why the public is so pitiably prone to such rumours. There has hardly been any attempt to study the organisational miracle' itself, the tactics and the strategies by which such a large-scale event was orchestrated.

One can begin with the outstanding fact that at about the same time on a particular day, and without any prior notice, approximately the same story was launched, in the same manner, in several cities and urban centres in India, as well as in some centres of Indian population abroad. Does this not straightaway imply some organisation? Can it all be only attributed to the well known axiom that news travels fast, and rumours still faster?

But this alone is not enough. Communicatio· s theory indicates that the casual spread of rumour alone cannot achieve this kind of coherence. First, the story moves like ripples from a pebble thrown into water, slowing down and petering out gradually, the natural limits being related to the size of the community, within which such communication normally travels – the family, the work place, the neighbourhood, etc – unless reinforced of course at regular intervals. Second, as illustrated by the well known party game, 'Chinese whispers' the message gets distorted as it moves. So that after a few dozen steps it is no longer recognisable as the original message – again unless repeated, of course, at regularly spaced intervals. These two basic trends are sufficient to establish that the same message was deliberately planted in several places at the same time – in other words, several pebbles were thrown into the water at the same time at well planned intervals. Third, the pattern of travel, starting from the north and west of India, travelling to specific centres, more marked in certain locations is suggestive. In Madras, for instance, the phenomenon was confined to certain localities, and within localities to certain idols – the locations of the co-ordinators? message givers? - gaining strength only after Doordarshan's 1 pm telecast; while abroad, specific centres of Indian populations known to be in regular telephonic contact with relatives/business partners in India were the foci – geographical distribution of the cadre? Thus the plan was obviously tailored to take full advantage of the natural rhythms of rumour, based on a clear understanding of communications theory.

The latter is true, specially in a predominantly oral culture like India which has its own traditional means of communication. During the freedom struggle, for example, when AIR, then in its infancy, was controlled by the government and the reach and power of the press was far from what it is today, news about the various movements, struggles, satyagrahas and fasts, and even Gandhiji's daily marches and activities spread very fast around the country. Even a century ago, during the 1857 war, strategies like the 'chapathi and onions' were used to convey messages rapidly through the remote countryside. But these messages were not casual or unconnected ones – the stories were carefully selected and planted.

This leads to the question – in this case, who was sending the message, to whom and why? Which organisation, in today's world, would have the capability, in terms of a large, well spread out and disciplined cadre, to undertake such an exercise? Why and how did it all start at the same time? Why did it last only for a day, if it was not a demonstration? While it is not possible to definitely establish, without further evidence, who was behind it, certainly a study of the 'how' would be most revealing and may even lead directly to the 'who'. This can be done by examining some similar well-orchestrated communication events that have taken place in the recent past.

The most outstanding parallel in recent memory is a curious incident which took place in Delhi in September 1976, during the dark days of the Emergency, when Sanjay Gandhi's coercive campaign for family planning was at its height, and while the resentment of the people had no legitimate forms of expression, and the political parties and leaders who could have led protest were

underground. This was a climate in which, in May 1976, teachers of Class I in NDMC schools were obliged to tell their pupils that their promotion to Class II was conditional on their bringing 'sterilisation' certificates from their parents. All Delhi was rocked by the amazing spectacle of the tearful pleadings of five- and six-year-olds (who barely understood what they were saying) to their parents to please get sterilised quickly! The salaries of NDMC teachers were held over the summer vacation (in some cases, till August that year), till each had produced five such certificates. Fear, anger and suspicion were the dominant emotions of the people, especially in the poorer areas and slums.

It was in this context that a one-day 'demonstration', if not a miracle, was organised by someone whose identity can still only be guessed at. On September 10, at about 11 a m a few mothers came agitatedly to one of the municipal corporation (MCD) primary schools in which the author happened to be working at the time, saying that they had heard that a medical team in a van was about to descend on the school shortly to give young girls an injection that would render them infertile for life! (It should be mentioned here that in Delhi, most of the 1,800 MCD primary schools function as girls' schools from 7.30 a m to 12.30 noon, and become boys' schools from 1 p m to 6 p m, for reasons of shortage of accommodation.) Soon the few swelled to a noisy, mostly female, but threatening crowd, and the principal and teachers had no option but to allow the girls to be hastily escorted home by the parents. No one could say how the rumour had first been heard and the situation was too tense to allow for such questions anyway.

By afternoon, it was obvious that the same thing had happened at the same time in all the MCD schools in the locality. Within the next couple of days, it became known that the same phenomenon had occurred in all the MCD schools, that the entire city had been covered from north to south, and east to west. No one could say where and when or by whom the rumour was started, but the same story, couched in the same language, had been simultaneously heard everywhere. All this was on the grapevine, which was very active during the Emergency. There was no reference to the matter in the press, and no comment in the media. The author can personally vouch for the extent and sameness of the phenomenon, having checked the details not only in the eight schools where she was at the time co-ordinating an educational project, but also with teachers, supervisors, heads of schools, and others in the official hierarchy of the education department of the MCD, and parents in several slum areas. An amusing outcome was that the author, whose appearance conforms to the stereotype of a 'lady doctor' (white sari, greying hair, authoritative manner) had for several weeks afterwards to face considerable hostility and be provided with 'safe escort' through the slum areas to enter even the schools where she had been regularly working.

Thus, without benefit of media or modern technology, a well organised group was able to prove, beyond measure of doubt, that it could reach the entire population of the city of Delhi at one time, with a carefully selected, provocative message couched in clear, simple language; not only that, it could give a call to action and get an appropriate response. Naturally, no one ever came forward to take credit for this communication 'miracle' (they could hardly have done so during the Emergency and got away with it!). But surely this was a most daring display of organisational strength, discipline, clarity of objective and skill in communication, using the only medium available at the time, the traditional face-to-face oral one. At the time, one could not but applaud this dazzling slap in the face for the government, administered by a cadre whose organisation could use such methods for more sinister purposes than protest against an oppressive authority. Yet, since municipal schools serve mostly the poor, few among the educated middle-class (and none beyond Delhi) even came to know about this phenomenon; and of those who did, most tended to scoff at it with flippant remarks about the speed of rumour and how good illiterate Indians are at managing communication without technology, and more of that nature. Hardly anyone was prepared to take it seriously as a show of strength. Was this a mere flexing of muscles, a practice run for bigger things to come? A warning signal to the enemy, or a reassurance to a dejected cadre? Or a little of all of these?

In the incident of September 21, 1995, one can see the same hand at work, the same methodology, but this time fully backed up by modern telecommunications, the telephone and the media. The message was clearly a demonstration of power. Are we listening?

Two other incidents come to mind, which follow a similar pattern and corroborate the hypothesis of a deliberate plan. Soon after Indira Gandhi's assassination, a rumour was started, which spread like wildfire, that Sikhs had been seen distributing sweets to celebrate the event. To this day, no one has ever come forward with evidence of having actually, with his or her own eyes, seen such an incident – yet the rumour rocked the city of Delhi, and to some extent the rest of the country, and indeed the world, for weeks or even months afterwards. Who started it, and how, and why?

Two nights later, between mid-night and 4 a m, the city was once more swamped, this time through the telephone, with rumours that Sikhs had thrown a dead body into the waterworks in order to poison the water supply. Here the target was obvious - since (no telephone booths in 1984) only the educated, middle class, perhaps affluent, owned telephones. All night the phones were ringing. The author herself received about four calls (from kind friends and relatives) warning about the poisoned water supply, and suggesting that duty demanded that the message be passed on to other friends and relatives, rather like the chain letter phenomenon that used to plague our school days. The author, in sleepy outrage, refused to participate in this exercise of neighbourly goodwill, but checked next morning with a few scientifically more knowledgeable persons than herself, and was relieved to note that the whole idea was ludicrous. Yet night-time unease and fears were so quickly aroused among a highly educated but fearful and suspicious public. The prevailing climate may help to answer the question - why did they fall a prey so easily to these fears? But the question which few asked or are asking now is: who started it, and why?

That even an inept government, which had media at its command, can start a fear campaign, was proved during the last total solar eclipse of 1981 when the repeated, lugubrious and doomladen statements of Doordarshan, beefed up by the gloomy 'Scientific predictions' of some government ophthalmologists, kept all citizens, young and old, indoors during the eclipse, trembling in fear for their eyes and crouched before their TV sets. Perhaps the government intended to reply to the 1976 incident in its own way, and show its power to control the public through playing on fears, but if so, what a tame show it was. While the shadowy and unknown provocateurs could arouse people to violence, the government could only make them shiver miserably in their shoes. The very different manner in which Doordarshan handled the total solar eclipse of October 24, 1995 illustrates this point even more spectacularly.

The 'milk' miracle, therefore is really a miracle – but not a divine one. It is a miracle of human organisation, and ingenuity – a triumphant display of strength, a reminder of what can be achieved, now with the help of technology and mass communication. For this time the stage was not one city, but the whole country, and indeed the world (those parts of the country and the world where the organisation has established its presence, of course). If we are not alert to understand and expose the objective of such exercises, we will soon be made to understand it in more unpleasant ways – there will be more such displays, each more sensational, more widespread and more ambitious in scope, and indeed more dangerous and threatening than the last. Citadels are never stormed without due preparation. Here the generals are demonstrating their power to control the people, in full view of the people, confident of getting away with it once more. Isn't it time to take a hard look at the orchestration of miracles?

Triumphs of the Media Behemoth

Frederic F Clairmont

The foundations of international capitalism are being reshaped at a phenomenal pace. The drive for bigger and bigger mega deals this year has surpassed those of any year in the record-breaking decade of 1980s. The most striking illustration of the pace of concentration is seen in the US communications industry.

BY graphically branding The Fortune Global 500 as "the planet-prowling Behemoths" Fortune's compilers[1] have rightly drawn attention to their similarity to beasts of prey, which is apt; but that will not do since the paramount 500-1,000 TNC masters of the global economy can better be analogised to a rampaging gulag. The concept of a market, which is not synonymous with capitalism, to describe the operations of the mega gulagite corporations is fallacious. They have become an anti-market catalyst, an anti-democratic totalitarian agent, the liquidators of property, of small and medium-sized firms and indeed the mass demolitionists of sizeable chunks of the global workforce. Indeed they are anathema to the theory and practice of democracy.

The pace of corporate concentration remains unchecked. In the month of August this year it seemed that the virus of mergers and acquisitions had reached its zenith. There is no reason however to assume that the multi-billion dollar grabs now rocketing into the stratosphere as well as pumping up the Dow Jones index to record-smashing heights, will taper off in the run-up years to the advancing millennium. This stems from the prevailing conjuncture in the indivisibly hegemonic world of the Transnational Corporate Gulag.

The sheer and unstoppable power of this wholly destructive force buttressed at every turn by their political satraps and their own mediatic Behemoths have engendered a climate hospitable to deregulation, privatisation and liberalisation, the familiar sordid trinity of alibis under which the TCG breeds and proliferates. To be sure, the cheap and plethoric mass of liquid capital surging from the transnational banking circuit, the mutual and pension funds and the mega insurance companies has become the financial feeder base for every specie of corporate annexationism, speculation and unbounded skullduggery.

The drive for bigger and bigger mega deals this year has surpassed those of any year in the record-breaking decade of the 1980s. In the US alone, the numbers are stunning: in 1994, according to Securities Data Company, mergers and acquisitions hit $ 325 bn; in 1995, they are expected to rocket to $ 340 bn. In the US alone, between 1990 and 1995, they scaled $ 1.4 trillion. Worldwide they totalled slightly less than a staggering $ 3 trillion. It is these endless aggrandisements that define the compulsive big-money drives of the transnationalised gulag.

The foundations of international capitalism are being reshaped at a phenomenal pace with cataclysmic consequences. Not a single sector escapes the corporate gulag's stranglehold. What we are seeing is the display of naked unaccountable power. Ricardo Petrella hit the jackpot when he said that there is no need for justifications. The rationale behind this deployment of Big Capital's muscle is lucid: "I'm going to swallow you up because I need to expand my market share. And it's far cheaper to gobble you up than expand productive plant. There's nothing you can do to stop me because I'm bigger than you are, and there's nothing and nobody that can stop me from gobbling you up." Such is the law of the corporate gulag. That is the crux of corporate predation: that is the quintessential motive force of capitalist accumulation that defines the central working and mis-workings of the system.

Among the more recent conspicuous examples has been the gobbling up by the Agnelli family, which controls automaker Fiat, of the once mighty Ferruzzi financial empire via a series of asset swaps. Agnelli has created a conglomerate with sales of around $ 25 bn: from chemicals to publishing to insurance. One of the most illustrious and oldest firms in the UK power plant industry (Babcock International: one of the world's top five producers) has been grabbed by Japan's Mitsui's Engineering and Shipbuilding Division. Hanson, one of the world's fattest British conglomerates, continues his predations by gobbling up Britain's largest electricity distributor, thereby extending his base from seven diverse businesses to eight. And so it goes. Hardly, a day passes without the announcement of a billion dollar corporate takeover.

The entire American and global financial services sector is undergoing the swiftest consolidation in its history. The gobbling up of the Chemical Banking Corp by Chase Manhattan (the bank of the Rockefellers) spawns the biggest American bank with assets outstripping $ 300 bn. Here the apparition of the gulag surfaces in one of its most putrescent manifestations: by this grab more than 16 per cent of its combined workforce will be liquidated. Concentration and centralisation of capital is simply careening out of control.

The name of the game is downsizing, yet another mellifluous alibi, which translates as rapacious cost-cutting (the old fashioned word was rationalisation). In sum, chop your workforce and keep on chopping, slash wages to the marrow, smash any glimmer of labour 'trouble' and in so doing, so goes the triumphalist corporate shriek: "you'll become more competitive internationally". This is the 'mantra' repeated *ad nauseam* within the academic neoclassical brothels, peddled by the abject compradore intellectuals within the now-colonised United Nations secretariat.

Indubitably, the most salient illustration of the pace of concentration is seen in the US communications industry. The US media Leviathan has always been *par excellence* an instrument of the crudest US ruling class propaganda and an overpowering battering ram of US cultural hegemonism and rationaliser of US state terrorism. The gulagite offensive in this sector will exacerbate immeasurably this frenzied thrust. In a flamboyant declaration that exemplifies the ferocity of the communications gulag, Ted Turner, boss of the Turner Broadcasting System, provides an invaluable insight of the logic of corporate war: in short the propellants of the unstoppable gluttony of the TCGs:

> I have to compete with Rupert Murdoch who has his own studio, who has his own broadcasting network, and his cable network. I'm having to fight with one hand tied behind my back. It's like fighting a war without an Air Force. If the people you're fighting with have an Air Force, you've got to have one too. All my life I've been on the outside. I'm sick of it. I want to be able to stand at the first class table. I don't want people pushing me around any more.[2]

We can sympathise with Turner's incessant babbling and demented urge to crank up his propaganda machine. Analysed in the wider perspective of a *univers concentrationaire* gone berserk the utterance helps us to unmask the gulag's insatiable gluttony. July 31 will henceforth be a significant milestone in gulagite media history, indeed of corporate media aggrandisement. On that date Disney swallowed Capital Cities/ABC, the communications and television group for $ 19.1 bn. The world's largest entertainment

company was born. For the moment Time Warner was left in second place. But not for long.

The deal, as others of its kind, had nothing to do with promoting 'pluralism' or any of its fancy euphemisms. The deal was for big-money in the exclusive interests of big-money men. Or if you prefer the bottom line. A deal brokered by billionaire investor Warren Buffett who held 13 per cent of Capital Cities stock. He was instrumental earlier in merging Capital Cities and ABC in 1986. With the consummation of the deal Buffett raked in a profit of $ 2.5 bn, a seven-fold boost from the 1986 investment. Wall Street was ecstatic. Capital Cities shares took a 25 per cent leap as big time investors pounced for a piece of the meat. The Dow Jones index hit record levels. This is precisely what a CC spokesman meant when he ejaculated that: "big is good; bigger is better but biggest is best".

How was it feasible for Disney with a market valuation of $ 32 bn to pull off a deal with the purchase price of $ 19 bn with only $ 10 bn in cash? The short answer is that there is no capital shortage: banks are flush with cash; their profits are lush; bond markets are friendly to acquisition finance. And of course Disney's annual cashflow is considerably higher than its interest charges. "We are essentially pimps" declared one corporate financial officer, "and I can tell you that the pickings are really lush. And when you got Disney deal on your plate you don't mess around." Wall Street didn't need convincing.

Disney set off an immediate chain reaction. The communications industry was now in play. Six days later, Westinghouse Electric Corp bought out CBS, a subsidiary of the Loews tobacco, hotel and insurance conglomerate, owned by the Laurence Tisch dynasty for $ 5.4 bn. An El Dorado deal as it was immediately baptised that enriched the dynasty by $ 1 bn overnight. Disney's mega merger triggered a move whose reverberations the corporate hustlers had never imagined.

Just 18 days after the Disney deal had been wrapped up two giants were to upset what was labelled the biggest media deal in history. It brought together Time Warner's Levin and Ted Turner: a marriage born of strategic necessity. Time Warner already owned 18 per cent of Turner Broadcasting System. Turner was bought out in an $ 8.5 bn deal structured as a share swap. By the deal he became vice-chairman as well as the biggest stockholder in the newly merged Behemoth. Time Warner would retain its leading position within the media gulag, with annual revenues of $ 20 bn against Disney's $ 16.4 bn. Presumably Turner 'would not be pushed around any more'. The poor creature had now found himself an air force.

But there were other big players in ball park. They included another family dynasty, Samuel Bronfman owner of Seagram (the alcohol beverage group) and Time Warner's largest (15 per cent) shareholder, a share that will be diluted with Turner's adhesion. The power of the new network was rapidly expanding. Earlier in 1995, Bronfman had bought about 82 per cent of MCA, the Hollywood film and music giant from Japan's Matsushita. One more colossus had strutted onto the stage of big-money predation: Tele Communications Inc that has sizeable shares of both CNN and Time Warner. It is this phalanx of prodigious unaccountable muscle that will henceforth dictate the rules of the media gulag on both the American and world media. And you can be sure that India will not be left in the cold.

The method and financing of these gargantuan deals, and who gains from them, are less important in the long run than their ferocious ideological impact. As Ben Barber[4] puts it pithily: if you own movie studios, buy book companies and theme parks and sports teams. If you own hardware, buy software, as Sony. If you own television stations buy film libraries and if you own a studio and a film library (TNT) get yourself a big television network. No doubt that's only a starter.

What the hapless citizenry is confronted with is the presence of burgeoning and unchecked raw gulagite power. The communications industry in its widest technical connotation is the world's fastest growing sector. Its belligerent protagonists are an exiguous bunch of men, whose ranks are becoming thinner all the time, but whose global leverage is exponentially shooting up.

They comprise, amongst others, Robert Murdoch (nationality: American, Australian, British); Berlusconi and Leo Kirch, the biggest private owner of television networks in Germany, a personal friend of Helmut Kohl (obviously a sworn enemy of public television) bankroller extraordinary of the ruling political cabal; the Christian Democratic Union, media and publishing tycoons Axel Springer and Bertelsmann, and Johann Rupert mogul of one of South Africa's biggest communications, financial and industrial empires.

The media gulag has already gobbled up most national news organisations. The communications industry in the US and elsewhere is among the biggest and most vocal contributors to political mendicants, the most notorious of lobbyists. The Anti-Trust Division of the US Justice Department is impotent to modify this tragic trajectory because Anti-Trust does not operate in a political vacuum, inasmuch as the US Justice Department, notwithstanding its sanctimonious claims to the contrary, is an obsequious domestic of Big Capital. Opposition is squashed.

In the present pestiferous international political environment, so congenial to the strides of Big Capital, deregulatory measures becomes the orders of battle. Deregulation paradoxical as it may appear moves hand in hand with the most blatant handouts of state interventionism. Illustrative is that no chief executive in the history of the US has been such an activist tout in the interests of big capital as Clinton, a description that dovetails with the activism of Margaret Thatcher and Helmut Kohl. The media oligarchy and their political pimps do not operate according to the rules of *laissez-*

faire. Theirs is a managed economy. Economic liberalism is the doctrinal fig leaf.

In the US, in 1995, bills passed in the House and Senate call for sweeping deregulation that would wipe out most impediments to media ownership. The Republicans have already scored their points. Public sector communications networks based on quality programming and news gathering objectivity are judged hostile to the media gulag, and hence targeted for liquidation. This legislation is premised on the Murdochian dogma that in the era of satellite and cable television media ownership restrictions and controls are both pernicious and superfluous.

The growth of gulag power – and not only in the mediatic gulag – must be analysed against the backdrop of mounting class conflicts and unacceptable social polarities. In the US, 10 per cent of families own 70 per cent of the nation's wealth. As Paul Krugman indicates the upper class is pulling away from the middle class.[1] It is not just that the top 20 per cent have grown richer compared with the rest. The top 5 per cent have grown richer compared with the next 15 per cent. The top 1 per cent have grown richer compared with the next 4 per cent and the evidence certainly pinpoints that the top 0.25 per cent has grown richer compared with the next 0.75 per cent.

In the US (no doubt more or less the same order of magnitudes apply elsewhere), the income gap between the chief executive officers (CEOs) and workers is exploding. The CEOs as the leading echelon of the capitalist class presently make 150 times workers' average salary - up from 35 times in 1974. Workers' real wages have tumbled over the last three years but the bottom of the barrel has not yet been scratched. Productivity as an index of exploitation has risen everywhere but what it has achieved is to enhance the market share and profits of the corporate gulag. A process which, by its very nature, is self-defeating, for the very old but transparent reason that labour exterminism means slashing consumption and consumption accounts for 65 per cent of GDP. In short deepening the crisis.

But this will not be the message of the corporate gulagite media as it celebrates its profit bonanzas and fatter market shares at end 1995 with hopes of more to come in 1996.

Notes

1 *Fortune*, August 7, 1995.
2 Ibid.
3 In the days following the acquisition of CBS a sequel of small but significant media acquisitions occurred. The Dow Jones Company and ITT Corp jointly bought the WNYC Channel 31 from the City of New York for $ 207 m in cash; NBC, a subsidiary of General Electric, bought out Outlet Communications Inc, owner of 3 television stations, for $ 396 m; Chancellor Broadcasting Company bought 19 radio stations from Shamrock Broadcasting for $ 400 m. By early September the Standard and Poor's Broadcast index was 40 per cent higher than in January.
4 *International Herald Tribune*, August 2, 1995.
5 *The New York Times*, August 22, 1995.

Canada Undone?

Signals from Quebec Referendum

David S Philip

The narrow margin by which Quebec's attempt to secede was rejected allows no room for complacency regarding the future of Canada's federalism.

SOME things just not make sense. Take Canada – a country with a super-abundance of natural resources and the second largest land mass in the world; a country ranked first in terms of human development by the United Nations twice in the last five years; a country more caring and less violent than its giant superpower neighbour to the south; and a country that to millions in the developing world stands as the beacon of hope for a better life. With so much to be thankful for, you might think the Canadians would count their blessings and get along with each other. Instead, on the evening of October 30, 1995, practically everyone in this nation of 29 million could be found anxiously huddled around TV sets watching results trickle in from a referendum in the French-speaking province of Quebec. You could almost hear a collective sigh of relief as Quebec's five million eligible voters rejected by a margin of just 53,498 votes a bid by the Provincial Parti Quebecois to enter into discussions with the government of Canada that could lead to an independent state of Quebec. But the contest was so close (50.6 per cent for the No side, 49.4 per cent for the Yes), that many wondered if it could be called a victory at all.

Canadian prime minister Jean Chretien immediately announced the formation of a special nine-member cabinet committee to examine ways to accommodate Quebec's demands for constitutional reform. But he insisted the referendum was final and that Canada would not allow itself to be held hostage to what some wags have called a 'neverendum'. Parti Quebecois leader and Quebec premier, Jacques Parizeau, announced his resignation the day after the defeat of an issue he had staked his political future on. But others within the party have vowed to fight on. "The battle for a country is not over. And it will not be until we have one", said premier Parizeau. Be that as it may, the referendum's failure to clearly resolve anything makes it certain that the future of Quebec will muddy Canada's political waters for the foreseeable future.

By now, it's something most Canadians wish would just go away. The 'French problem', the 'Quebec question', call it what you will, it's an issue that has hung like a yoke of stone around the neck of Canadian political life for the last two decades and defied repeated attempts to fixt it. But while it's modern manifestations may be particularly virulent, the real roots of the problem antedate the founding of Canada itself.

From Confederation to Parti Quebecois

The French settlement of Canada preceded that of the British. By the 17th century, New France, the colony on the banks of the St Lawrence river that would become Quebec, was a well established outpost of the French empire. But in 1759, a British expeditionary force under general Wolfe defeated a French army on the Plains of Abraham within the confines of the present-day provincial capital of Quebec city. Eager to secure the co-operation of their new subejcts, the British allowed the French to keep their language and Roman Catholic Christianity. But from this point forward, French-Canadians began to conceive of themselves as a subjugated people, and the British tolerance set the stage for Canada to evolve into two distinct societies or 'Two Solitudes'. In 1867, the act of confederation brought the French in lower Canada into political union with the English in upper Canada. Even then, however, French-Canadian or Quebecois society tended to be poor and rural in comparison with English Canada. Matters were not helped by the Roman Catholic church which encouraged large families and emphasised classical at the expense of modern education. The corrupt regime of Quebec premier Maurice Duplessis (1945-60) made things even worse. Business and commerce within Quebec was largely controlled by English Canadians and the English language enjoyed pride of place in important affairs.

The so-called 'Quiet Revolution' (1960-66) ushered in a period of intellectual and

he first step towards redressing its historic disadvantages. Some industries were nationalised and the provincial government agitated for a greater share of federal powers. But other Quebecers were too impatient for his piecemeal approach. Only a sovereign independent Quebec could make French-Canadians *maitres chez nous* (masters in their own house). In 1968, Rene Levesque, a fiery, chain-smoking former journalist, helped found the avowedly separatist Parti Quebecois. But for others, even this was too little too late. In October 1970, after a wave of bomb attacks in the commercial centre of Montreal, the terrorist Front du Liberation de Quebec (FLQ) kidnapped a British diplomat, and Pierre Laporte, a provincial cabinet minister was later found murdered in the trunk of a car. Prime minister Pierre Trudeau invoked the war measures act. Civil liberties were suspended and hundreds arrested before calm was restored.

Levesque's Parti Quebecois took control of the provincial government in 1976. Four years later, voters were asked to decide if Quebec should seek a new arrangement with Canada called 'Sovereignty-Association'.

An opportunity to head off Quebec's drive for independence once and for all arrived with the repatriation of Canada's constitution from Britain in 1982. Quebec, however, refused to sign the document without significant concessions from the federal government. To become law, the document required the unanimous consent of Canada's ten provinces, the leaders of which were loathe to see Quebec given special status or privileges. In 1987, prime minister Brian Mulroney tried to break the constitutional deadlock with the Meech Lake accord which recognised Quebec as a 'distinct society' without defining what that meant. The accord failed to win unanimous support from the provinces in 1990. Another unsuccessful attempt to bring all parties on board was made in 1992 at the Charlottetown conference. Quebec was offered 25 per cent of seats in the federal house of parliament in perpetuity to allay fears that Quebec's voice in federal affairs would decline as English Canada's population grew. But again the provinces balked at what smacked of special treatment. Canada's leaders will meet again in 1997 to give it another try but during the referendum campaign, Clyde Wells, the premier of Newfoundland, who helped scuttle the Meech Lake accord, said he would never agree to any kind of special status for Quebec. The repeated failure to make allowance for what Quebecers saw as their legitimate demands within Canada's existing framework led directly to the re-election of the Parti Quebecois on a promise to take matters into their own hands.

Many Canadians would argue that Canada Quebec. Canada, they point out, is officially bilingual. Quebecers, for instance, can ask for and receive federal government services in French whenever they travel in Canada. For 25 of the last 30 years the prime minister of Canada has been from Quebec and French-Canadians are over-represented in the federal civil service. As well, under a special arrangement with the federal government, Quebec can select its own immigrants and has received about $ 160 billion from Ottawa since 1961, more than any other province. In Quebec itself, the notorious Bill 101 or Charter of the French Language prohibits public signs in English and promotes French as the primary language of education. It is no exaggeration to say that Quebec today is a virtual country within a country with its own writers, recording artists and film industry.

Ironically, while the Parti Quebecois is strident in its defence of Quebecers' rights within Canada, it seems less willing to extend the same rights to minorities within Quebec. Nothern Quebec, an area rich in hydro-electric and other natural resources, is home to 20,000 Cree and Innuit aboriginal peoples who want nothing to do with an independent Quebec. But the Parti Quebecois is equally adamant that they shall stay.

Some political commentators in English Canada believe that premier Parizeau and his colleagues are little more than French-Canadian ethnic chauvinists. Lucien Bouchard, leader of the separatist Bloc Quebecois in the federal house of parliament, caused an uproar in the run-up to the referendum when he voiced widespread concerns amongst French-Canadians about their declining birth rate. The Quebecois, he said, were "one of the white races that has the least children". Premier Parizeau made matters worse blaming 'money and the ethnic vote' for the referendum defeat.

The Parti Quebecois leader refused to apologise for his remarks. He was, he maintained, only telling the truth. Indeed, reliable surveys estimate that 80 per cent of recent immigrants to Quebec, including a majority of the large numbers of Indo-Canadians in Montreal, rejected independence. Many ethnic voters prefer to have their children educated in English, the language of economic opportunity outside Quebec, and are apprehensive about the economic consequences of independence. But whether the ethnic vote tipped the balance or not, the closeness of the referendum result clearly revealed deep regional and demographic divisions within Quebec itself. Urban Montreal and the Eastern Townships to the south largely voted No, while support for the Yes side was concentrated in the predominantly French-speaking areas to the east. Even here, however, it is estimated that independence. And even amongst the 60 per cent of French speakers who voted Yes, there are indications that firm support for independence may be less than imagined.

One pre-referendum survey found that at least one-third of Yes voters believed that they were voting for some kind of continued association with Canada. The phrasing of the referendum question seemed deliberately ambiguous, mentioning sovereignty but also a 'new economic and political partnership' with Canada almost in the same breath. Early on, Bloc Quebecois leader Bouchard was unequivocal. "A Yes vote will inexorably lead to sovereignty. It matters little whether or not there is a partnership", he said. But when polls showed that support for outright independence was soft, he emphasised negotiations towards a mutually satisfactory arrangement with the federal government. But whatever the prevarications, there can be little doubt that talks with Ottawa will only be a prelude to complete independence. Parti Quebecois deputy premier Bernard Landry after the referendum defeat said, "Quebec sovereignty is coming too quickly for us to waste time on those kinds of acrobatic contortions".

Economic Hazards

There may be still other reasons why the Yes side's strong showing should not be taken at face value. These are tough times all across Canada. Disenchantment with the fiscal mismanagement of the federal government, especially under the leadership of former prime minister Brian Mulroney, has also encouraged separatist sentiment in western Canada. In other words, strong support for independence in Quebec, where, for instance, unemployment is well above the national average of 9.4 per cent may be a protest against Ottawa's economic bungling. Certainly the current turmoil is something both Canada and Quebec can ill-afford.

Canada's combined debt ($ 413.2 billion) and deficit ($ 32.7 billion by next March 31) is second only to Italy's amongst industrial western nations. If Quebec walks out, it has threatened to renege on its $ 78.3 billion share of the national debt. Investors would dump Canadian dollars and securities. The Bank of Canada would be forced to draw on international lines of credit, including possible conditional financing from the International Monetary Fund. And if Quebec did welch on its share of Canada's debt, per capita the largest of Canada's 10 provinces, investors would shun its own bonds and securities. Quebec is already heavily dependent on foreign borrowing. Over the next two years, Ottawa is slated to cut one-third of the $ 16.8 billion it annually gives to the provinces. The Parti Quebecois will likely make political hay out

of cuts that will primarily affect health and welfare programmes and post-secondary education. But if Quebec opts for independence, it will lose forever the $ 3 billion it receives in annual transfer payments from Ottawa. Quebec's provincial deficit stood at $ 5.7 billion last year and stiff spending cuts of its own will be included in next April's budget.

Prime minister Chretien maintains that even the Parti Quebecois' own economic studies forecast hefty tax increases and massive government spending cuts if Quebec leaves. Quebec's entry into the World Trade Organisation and North American Free Trade Agreement; the practical necessity of some kind of customs union between Quebec and Canada; and the questions of shared or separate currency and passports – all are complicated issues which will take Quebec and Canada valuable time to resolve. Quebec has already suffered an exodus of head offices to other parts of Canada and in the wake of the referendum, Canadian Pacific, one of Canada's two national railways, announced that it would move its headquarters from Montreal at a cost of 1,400 jobs.

How Canada's heavy east-west trade will be affected with its internal market split down the middle is anybody's guess. But with no resolution to the Quebec issue in sight the Canadian dollar looks headed for a bumpy ride. Hong Kong and Tokyo currency traders, for instance, unloaded Canadian dollars when early referendum returns showed the separatists in the lead then backtracked as the No side edged ahead. An unfounded rumour that Lucien Bouchard would resign was enough to make the Canadian dollar jump a third of a cent before closing at US 74.4 cents.

Legislation prevents the Parti Quebecois from holding another referendum in its current term of office. But there has already been talk of another vote or a combined election-referendum within the next six months to two years. Whatever happens next, leadership may play a decisive role. Perhaps buoyed by early polls showing the No side with a comfortable six to 10 points lead, prime minister Chretien was almost invisible during the campaign. Only at the last minute, when a virtual photo finish looked in the offing, did Chretien promise the carrot of 'distinct society' status. But by then it seemed like the desperate effort of a floundering man. Never known for his charisma at the best of times, rumours are rife that Chretien's days are numbered as leader of the federal Liberal Party. The leader of the No forces within Quebec, provincial liberal leader, Daniel Johnson, is as lacklustre as his federal counterpart. A national leader with the style and stature to win the hearts and minds of Quebecers is nowhere to be found. Reform Party leader Preston Manning is popular in the rest of Canada but he has practically built a political career on opposing Quebec tooth and nail. Jean Charest, the youthful French-Canadian leader of the Progressive Conservatives, has support in Quebec and knows the territory but his party was all but decimated in the last federal election.

In Lucien Bouchard, however, the separatists have a spellbinding orator for anyone to reckon with. Premier Parizeau turned over leadership of the Yes campaign to the 56-year-old former lawyer three weeks before the vote. It is now generally conceded that the Yes side's come-from-behind surge was due to Bouchard's mesmerising influence on audiences wherever he went. Some see him as unprincipled and utterly ruthless but his political potency is not in doubt. For two weeks after the referendum he kept supporters in suspense to consider his wife's objections to assuming the post vacated by premier Parizeau. On November 21, however, Bouchard announced that he would take over the leadership of the Parti Quebecois and become premier of Quebec next January. More ominously, he said he would not negotiate any kind of renewed federalism and there is nothing Canada could offer to change his mind. Mending Quebec's deplorable finances will be his first priority but analysts are now predicting another referendum within two years.

So, is Canada finished? Perhaps, and then again, perhaps not. Apart from a minor scuffle on the streets of Montreal between Yes and No supporters after the results of the vote were announced, the referendum campaign was a model of civility and decorum. Indeed, there is no better testament to the vitality and essential soundness of Canada's democracy that a question as sobering as the breakup of the country could be discussed without resort to force and violence. The current impasse may be a precious opportunity in disguise to fully and finally address the demands of Quebec and the other provinces from which a stronger Canada will emerge. No doubt many Canadians deeply resent Quebec's role as the petulant prima donna of Canadian federalism but there is also a heightened awareness that Canada without Quebec will not be Canada. The very principle on which the country was established, that Canada's two founding peoples could live together in harmony and mutual respect, will be repudiated. In a rare outpouring of demonstrativeness towards Quebecers, a crowd of 1,50,000 from all over Canada travelled to Montreal just days before the vote to attend a 'Crusade for Canada' rally. But it will take more than professions of good faith to sway the converted. Quebec's aspiration for nationhood is at bottom something beyond reason, pragmatism and economic good sense.

If voters decide to separate in another referendum, it is hard to say what would happen. The situation is simply without precedent and Ottawa has no mandate to negotiate the dissolution of the country. Prime minister Chretien has threatened to prevent Quebec's departure by invoking a rarely used federal veto over provincial legislation. But before he stepped down, premier Parizeau warned that he would issue a unilateral declaration of independence if talks with Ottawa bogged down. If the referendum did achieve anything, it has clearly revealed that Canada's status quo is unworkable. There is work to be done and the tasks at hand are clear. As Winston Churchill might have put it, "The battle for Quebec is over. The battle for Canada has begun."

Mathematisation of Human Sciences

Epistemological Sanskritisation?

Sundar Sarukkai

Sanskritisation is evident in the epistemological realm of the human sciences also. The excessive preoccupation with mathematics in particular, essentially suggests the attempt by the human sciences to climb the epistemological ladder. Use of charts, graphs, prediction methods help in validating the subject's claim to truth. But the increasing tendency of the human sciences to seek legitimacy through such ritualisation process also reflects its paucity to accept other modes of thinking.

SANSKRITISATION has by now become an established term in understanding social structure of caste and the dynamics of cultural change in India. That this term, coined by M N Srinivas in the early 1950s, is still used in a variety of contexts points to the significance of the phenomena associated with it.

In this essay, I would like to borrow the concept of sanskritisation to address a different question altogether. I use the word sanskritisation as a metaphor to show the similarity of a process occurring in the humanities in its attempt to formulate a human 'science', especially in the context of mathematisation. Thus, the concept is displaced from its original use in describing cultural phenomena to addressing epistemological questions and formation of discourses in the humanities.

Philosophers and sociologists have extensively written about the nature of discourses in human science. Schrag (1980) addresses the crisis in the human sciences and situates its 'genuine source' as the 'loss of origin' in man's inability to ask the question about himself, although the symptomatic reasons for the crisis are many. Among these are: 'excessive specialisation', 'increasing preoccupation with quantification and formalisation', and 'increasing impact of technology in scientific and human investigations'. Although accepting that quantification and statistical methods may be relevant in appropriate domains, an 'excessive preoccupation with measurement and statistical analysis' shows symptoms of what he calls 'methodological naivete' and 'methodological pretension'. The naivete is the assumption that such mathematical methods 'are more empirical than other methods'. The pretension arises when the 'method determines the content and the theory predefines the reality under investigation'.

As an extension to these explorations, I would like to elaborate on the possible ritualisation by which knowledge is created; mathematisation is one vital element by which this is accomplished. For the process of sanskritisation to occur, the existence of a hierarchy is of primary importance. Hierarchies do exist in the epistemological domain as they do within the academic culture itself. Hierarchies seem to be integral to the way new paths in epistemology are forged. It is in this context that one should view the tendency of the human sciences to imitate the methodologies of the physical sciences in the formulation of a brave new 'human science'.

It is not clear why the human sciences, at least in significant parts, tend to imitate the methodologies of the physical sciences, without taking into account the foundational criticisms of the truth-claims of the latter. In particular, the tendency to widely mathematise the human sciences can only be countered by a deeper study of the philosophy of mathematics. At least until such an understanding occurs, the borrowing of methodologies is very much akin to a ritual act. In fact, I argue here that some of the reasons which are transforming the nature of the discourses in the humanities strikingly resembles the process of sanskritisation and that knowledge is 'validly' being generated by ritual acts. I would also like to suggest that in this increasing era of specialisation within disciplines, ritualisation is an important 'tool' for epistemological 'growth'.

Summary of Sanskritisation

To quote Srinivas on his first use of this word – "A low caste was able, in a generation or two, to rise to a higher position in the hierarchy by adopting vegetarianism and teetotalism, and by sanskritising its ritual and pantheon. In short, it took over, as far as possible, the customs, rites, and beliefs of the brahmins, and the adoption of the brahminic way of life by a low caste seems to have been frequent, though theoretically forbidden. This process has been called 'Sanskritisation'..." [Srinivas 1962].

With this process, certain communities became upwardly mobile by imitating a 'higher-caste'. These communities, originally perceived to be 'inferior', took recourse to constructing an image for themselves by validating themselves on a basis similar, but not exactly equal, to the 'dominant' caste, if not the brahmins. The identity of a brahmin, itself constructed out of ancient 'texts', was an impetus for these communities to invent ancient textual lineage to validate their caste-claims. They borrowed many rituals from the 'upper-castes', including that of donning the sacred thread. They became vegetarians and stopped drinking, in order to transform themselves in this cultural context. They considered themselves as brahmins, and in fact, one finds the usage of brahmins as denoting a higher status among both the Hindus and Christians even today.

As a consequence, aspects of brahmin culture including the use of language, food habits, clothing and so on are emulated and sometimes reinterpreted. Thus, "The non-brahminical castes adopt not only brahminical ritual, but also certain brahminical institutions and values ... Sanskritisation means not only the adoption of new customs and habits, but also exposure to new ideas and values which have found frequent expression in the vast body of Sanskrit literature, sacred as well as secular" [Srinivas 1962].

The reason why the brahmins themselves were looked up to and sought to be emulated lay in the claim of these people to be the guardians of sacred 'truths'. Brahmins were the priests in all senses of the term. They were the validating agency even for powerful kings. They established an image of a wise, morally 'intact' representative of the citizens, whether they were that or not. They also established a monopoly over 'truths' hidden in sacred and secular texts and over the language competence required to understand these texts. Thus, their prime role lay in their acting as validating agencies of a person's and society's spiritual (and epistemological?) growth.

In what follows, I will single out two characteristics of sanskritisation – one, the existence of a hierarchy which drives this process and two, the phenomena of the

'lower' caste adopting the rituals and beliefs of a 'higher' caste. Such a structure exists within the academic structure of both the physical and human sciences. For example, there are rituals associated with institution-building, which includes the pecking order of academic positions, hierarchy order of institutes and universities, symbolism of research and its impact on society and so on. The physical scientists have been successful in the social realm of institutionalisation and more than successful in establishing claims to truth which, by its very process, marginalises the aims and methodologies of the social scientists. This has led social scientists to use these and similar methods to establish their credentials. The rituals used to make this pursuit successful include those in the areas of communication of results, political and social rhetoric. These also include the way a paper is ideally written; as Medawar remarks, to continue the myth of an order in creative thinking. Physics has been quite successful in fighting battles for resources and money in the name of scientific spirit and rationalism. The way these battles are fought are replete with rituals which the human sciences have now appropriated. But the more important rituals, which are also allied to sanskritisation, are those which lie in the epistemological realm. The relevant question therefore, is to ask how much of the 'new knowledge' in either of these sciences arises from a process similar to sanskritisation. And in such a situation, how does knowledge get legitimised beyond this imitation?

Epistemological Rituals

The meaning of rituals has been widely studied, most notably by anthropologists. It would be futile to look for an unified description of them. Rather, I isolate a few relevant characteristics of rituals, drawing upon some of their work.

Ritual has a connotation of being a 'blind' act; by itself, it is not supposed to refer to any 'objective knowledge'. It stands out in opposition to the methodology and rationality of the physical sciences, whose ways of establishing truth-claims are, allegedly, not out of belief but out of a necessary, inevitable method. This scientific, rational act of developing and accumulating knowledge seems to lie in the domain of functionalism. That knowledge gathering is not necessarily of this kind has been amply proved by many sociologists of knowledge.

What is perhaps more interesting is the presence of ritual acts in the methodological, scientific enterprise. Knowledge built on rituals immediately has different connotations: claims to 'objective truths' become shaky if knowledge gathering has vital components which are ritual in nature. As ritual acts, the activity becomes enmeshed in a belief system or systems, referring all the while to its own code.

Rituals function in many different ways. The following characteristics are particularly relevant in establishing how rituals function in the epistemological domain. They also refer to the process by which imitation of rituals becomes possible, thus leading to a model of epistemological sanskritisation.

In *Understanding Rituals* [de Coppet (ed) 1992], various authors discuss the multiple roles which rituals play in different cultural contexts. Daniel de Coppet refers to the intrinsic nature of rituals whose function is to establish a hierarchy of values among different communities. David Parkin notes the view held by some others, namely, 'that rivals compete to control the conduct of rituals in order to legitimate leadership roles'. He also mentions the formal, repetitive behaviour of rituals and Gerholm's 'instrumental' view of rituals as performances. Rituals as performances are a particularly important way to validate truth claims in academics. The ritual nature is most often subsumed under the name of 'right methodology'.

Baumann [de Coppet (ed) 1992] situates rituals in terms of the outsider and insider, essentially in contrast to the often held view that rituals are understood as internal systems. He approaches this through a study of rituals of punjabi Sikh community in London, thereby focusing on 'public' rituals in a plural society. He also suggests that rituals 'may equally speak to aspirations towards cultural change' and points to the 'frequency of outsider participation' in ritual acts.

These views of rituals can be conjoined varyingly as we attempt to understand how and why the human sciences try to model themselves on the physical sciences. They are illuminating when we compare the practices of the communities of physical and social scientists. As anybody who is conversant with the practices of these communities can attest, rituals are used, among other things, to 'legitimate leadership roles' and also to establish epistemological 'hierarchy of values', especially with regard to value-claims made by specialised fields within the individual disciplines. The case of theory, hierarchically above experiments, is the most common instance of this. Many more such examples, within theory itself, abound in these disciplines, both in the physical and the social sciences.

The role of rituals in creating leadership roles and formal, repetitive behaviour is immediately relevant to our discussion. One of the consequences is that the structure of academics and, in part, epistemology, is so because they are following rituals as means of validation. These views of rituals, especially Baumann's study of the 'outsider and insider', lead me to the conclusion that one of the important reasons why such borrowing of rituals happens is that the human sciences find itself as an immigrant in the culture of positivism, as paradigmatised by the physical sciences, and thus, in 'negotiating relationships' with this community, it borrows certain rituals from the other. Whatever the claims to objective knowledge be, it seems that various kinds of epistemological rituals are being incorporated in the practice of science.

Thus, epistemological rituals should be seen as the set of acts, which, rather than being looked upon as rituals within a belief system, transcend it and is mistaken for an epistemologically functional act. These rituals, therefore come to be seen as necessary methods to establish 'objective' knowledge claims. Which means that any route to 'truth' blindly uses these methods, thereby also continuing the ritualisation process.

This is best exemplified by the excessive preoccupation with mathematics, theory and methodology (with the physical sciences as a model), in the human sciences. The nature of discourse in these fields is more and more undergoing change; there is a definite tendency for this change to faithfully follow the paradigm of the physical sciences. Furthermore, certain new developments in these fields (at least those that rely on the model of physical sciences) do not seem to be intrinsic to the field nor sufficiently respectful of its complexities. My contention here is that some of these new methods, which claim a higher epistemological content because they follow techniques from the physical sciences, remain merely as rituals. They borrow these de-contextualised rituals from the physical sciences, in order to pull themselves up in the epistemological hierarchy; these fields are undergoing sanskritisation in this sense. In borrowing and imitating rituals established and 'useful' for another epistemological field like physics, they are reinforcing the sanskritisation process.

The relevance and importance of using mathematics in human sciences is not to be belittled or ignored. But on the level of practice, borrowing these 'tools' is not necessarily coherent with the foundations of human sciences. Definitely, using mathematics, without an adequate understanding of what it stands for, makes mathematisation itself a ritual. This means that the varied baggage of mathematics, including statistical methods, differential calculus and so on, used with indifferent regard to the context, begins to resemble ritual acts. The ritual arises from the belief that mathematics is the

the social and the physical world, just as Sanskrit was posited as being the unique language which 'spoke' the divine truth. Not having found other alternatives is not a sufficiently good reason for this belief. Even in physics, the pressing question is why mathematics seems so integral in describing the physical world. If applied mathematics is to be seen as a ritual even within the physical sciences, then it suggests that the physical world should be describable in ways which do not use mathematics. This view should not be too startling; such a possibility has already been discussed by Field (1989) in a limited context. The way mathematics is being (blindly) used in all fields points to it being an epistemological ritual. Even though one many times may not understand what the ritual means within a sphere of its significations with other rituals, using a ritual reinforces the absolute trustworthiness of it and legitimises the pursuit of knowledge via this route.

Equivalently, one should not discount the seductive power of symbols and their manipulation. The fascination with numbers and the prevalent belief that numbers somehow correspond to 'reality' much better than other possible ways of description is also an important reason for the tendency towards mathematisation.

Now consider the situation in the human and social sciences where mathematisation threatens to become indispensable. One finds new disciplines like psephology, econometrics, sociometrics, modelling, operation research and so on, which are dependent crucially on mathematical methods. The debate here is not whether these tools are 'effective' or not, for it is obvious that much 'progress' has been made in these fields. The sphere of knowledge is sufficiently accommodative of very many constructions, 'relevant' or otherwise; the question is whether these constructions are (partly) based on ritualisation. Equivalently, it is not the question of whether wearing a sacred thread really helps the brahmin in the way it is supposed to; rather it is in positing the sacred thread activity as a ritual.

If this is the case, then the use of mathematics to describe the physical and 'human' world is not necessarily a reflexive act; it lies more in the domain of an expected act. A way which, above all, validates a subject's claim to truth. And why so? Only because such mathematisation in the physical sciences has led to a description of the world which is claimed to be the correct one.

There are other rituals associated with mathematisation. One of them is that of modelling. Modelling involves rewriting, refiguring a non-mathematical problem in simulates: its solutions purport to show pointers of how the real system behaves. In other words, modelling is itself a simulacrum. Modelling projects itself with the help of 'simple examples'. This is the view that 'real-life' problems are difficult and that it is more instructive to choose a simpler problem which looks solvable and which seems to imitate the original problem. Such an approach is common in physics. Using simpler examples becomes another ritual through which we end up viewing problems. Complicated social dynamics are supposedly represented by toy models which can then be solved with mathematical tools known and understood so far. The fallacy here is obvious: there need be no direct or clear correlation on the level of solutions between a simpler example and its parent, the more difficult one. Success with these constructed problems most often points to having successfully solved a mathematical problem and not necessarily having solved the original problem which lies in the physical/social world.

The other rituals which are being imitated by the human sciences in their quest to legitimate themselves are indiscriminate use of tools like graphs and charts, designer software packages, developing methods of 'prediction', and so on, not necessarily in order to increase their 'epistemological content' but as tools of validation (as based on the methodology of the physical sciences). These rituals, which are used to 'good effect' in the physical sciences, often end up being an esoteric game when transplanted into the humanities. It succeeds in establishing an elite based on kinship to the elite in the physical sciences. The kinship is based on the similarity of rituals as followed by the other and comes to fore in the new claims to 'truth' arising through the practice of these rituals and perhaps little else.

Epistemological Sanskritisation

In the dynamics of mathematisation in the humanities, the process of sanskritisation can be clearly seen. The higher 'castes' of physicists and their like practise certain methodology (rituals?) and claim access to 'truths'. The language in which these 'truths' are brought forth is highly esoteric and specialised. The fact that most of the human population is not in a position to access this language of mathematics means that the scientists stand to mediate between the people and knowledge. Thus, the creation of the academic brahmins. To establish their epistemological superiority, various rituals, mainly those that do with the process of mathematising the world, are invoked. Over the last two centuries, they have succeeded in establishing their claims and are now Thus, their political power in mobilising much more funds than the humanities, or even convincing the common people that they are the ones who better understand this world we live in. The ones in the humanities, in an attempt to regain their social and political power, along with a desire to validate their epistemological claims, borrow and imitate the rituals of the physical sciences. That they are successful in upward mobility is shown by the study of economics, for example. Economics has, by many accounts, a higher epistemological claim than other social sciences today, mainly in its success in fast transforming itself into a subset of physics in its imitation of mathematising the subject. Thus, the humanities in its attempt to categorise and redefine itself as human 'sciences' show the effects of sanskritisation. This does not mean that the epistemological content of these new sciences, for example, economics, is inferior by any standard. Increasingly, it seems that it may perhaps just be that ritualisation is one of the more potent weapons in this project of knowledge.

One question may still remain: can mathematisation be viewed as a ritual in the practice of physical and the human sciences or does it necessarily constitute a way of knowing? If one can 'prove' that mathematics is necessarily the only way to know the world, whether physical or social, then it is only correct that human sciences come to be in the model of physics. This question is complex but one cannot accept this with surety without referring to the problems posed by the philosophy of mathematics. In fact, counter examples of constructing a physical description of the world without using mathematics are being attempted. Also, it is important to note that many fundamental laws including energy conservation, causality and Newton's laws cannot be proved within this mathematical context. These laws and phenomena can be repeatedly verified without establishing formal mathematical proof. In such a situation, using mathematics indiscriminately, only points to the nature of a ritual. Ironically, as in the original context of sanskritisation, in imitating the physical sciences thus, the human scientists are being rejected by the former. Thus, the elite nature of the few who possess knowledge is reinforced; their political/social/economic power is increased by invoking all the rituals.

If human science, increasingly, validates and legitimises itself through this ritualisation process then it reflects a paucity of thought in accepting other modes of thinking which perhaps mediate between the scientific and the philosophical. Schrag suggests a radical hermeneutic; various other

ways have also been proposed by others. Unless this occurs, the epistemological path perhaps will remain only as a ritual paving, partly because of an inability to separate the effectiveness of discourse from its ritual content. The human sciences surely become upwardly mobile in such a borrowing and imitation, but whether they are closer to where they want to be, remains the unanswered question.

Two 'Cultures' – On Facts and Experiments

In order to consolidate the main conclusions given above, the contrast between the physical and the human sciences with regard to its conceptualisations, notably in the realm of facts and experiments, should be studied.

Objectivity in the physical sciences is a many-layered concept; it is in the realm of the unperceived, or that of ideas, that objectivity becomes a meaningful term. It occurs when something unknown is projected into the known in such a way that it is recognised as such by anyone who can access it. Objectivity arises not necessarily out of any perception of truth but as one form of an explanation of a particular human activity. It is the establishment of a common mode of thinking in order to propagate the 'unseen'.

Objectivity is reinforced by repeatability/ verifiability. But repeatability is itself not intrinsically objective. The culture of experimentation and the breed of 'good' experimenters is itself unique. Repeatability calls for a specialisation which itself leads to a natural view of solidarity. The presence of complex, non-objective elements in experimentation in the physical sciences has been documented. The other obvious problem is with phenomena which have occurred once and may not again, or for which one does not have sufficient understanding to re-create it. What is the 'empirical' and 'objective' status of such observations, the kind which many times occur in the human sciences?

The above discussion can be rephrased along the arguments of the coherence theory of knowledge, which claims that 'every belief requires justification and that a belief can be justified only by reference to other beliefs' [Walker 1989]. Knowledge is constructed out of our system of beliefs and a claim to knowledge arises in terms of its coherence with that system of beliefs. Played against this is the foundation on which the physical sciences lie – the correspondence theory, where there is a world existing independent of us and our knowledge and truth propositions are in correspondence with that world. This is primarily established via 'facts' and extrapolated with the help of theory. The coherence theorists would consider that the concept of independently existing 'facts' is itself incoherent and that what one construed as 'facts' are identified as such only within the system of our beliefs.

Thus, the immediate difference between the physical and human sciences should focus on the nature of 'facts' which they deal with. The domain of facts which are explained and theorised upon are different in these two fields. If identification and categorisation of facts belong to a coherent system, then it is important to understand what facts themselves become in these respective discourses. In appropriating techniques which establish knowledge claims, from one discipline to the other, the respective coherent systems which are different must be properly taken into account. Even at this level, a blind imitation of validating techniques from one to the other is filled with potential misinterpretations.

Schrag makes the distinction between world-facts which are distinct from abstract, empirical facts. The world-facts are configurative rather than atomistic as the empirical facts are. Their very appearance require the background of a natural and social world. Also as experienced world-facts, they implicate an experiencing subject. Thirdly, they have a meaning-bearing character. Thus, in this case, Schrag argues, fact, meaning and value become inseparable.

The other important characteristic of physical sciences is that of prediction. Once again, a detailed discussion of this takes us too far from the points I wish to make here. Suffice it to mention that the problematics inherent in this cannot be overlooked easily. It is important to note that successful prediction is in direct correlation with the amount of control one is able to exert on the system. This point should be carefully considered when one talks of prediction in the human sciences as contrasted with the physical sciences. The other residual question regardng the role of theory in experiments has also to be taken into account.

It is an old question as to which came first: experiment or theory. Many sides to this issue have been raised and many positions taken. Ian Hacking (1983) has staked out the claims of this debate, in physics, with historical examples. On the one hand, many of us have come to believe in the theory-laden approach to observation and experimentation. This claims that what we observe is only on the basis of a theory which we already have. Theory becomes the main motivator to generate and recognise facts as such. On the other extreme is the view that one does experiments independent of any pre-conceived theories about what we expect to see; observation is pure. The starting realities may lie somewhere in-between, oscillating between a few examples for theory-laden view and many more for the pure observational view. The primacy given to theory as the means of discovering newer realms of reality is definitely under strain. The need to understand the world as is, through experimentation and through 'intervention' has many reasons to justify it. In such a paradigm the importance of questioning the nature of how theories should be formulated in the human sciences becomes critical. Theory in physics has been dominated by using mathematics. There is now valid reason to question whether this is the only or even the best way we have to understand the hidden layers of knowledge.

Even the very view of experimentation (as intervention?) is itself a paradigm for doing experiments in today's world. Should experimentation be only as defined in the physical sciences? Is observation through control, through sophisticated machines, the final goal of experimentation? Should reductionism, arguably the philosophy of most experiments in physics today, be the final goal in any field? Should the meaning of prediction itself, tied intimately with modes of experimentation in the physical sciences, be readdressed? Can hermeneutics play a role in defining newer methods of experimentation in the human sciences? What other modes of 'empirical' enquiry are eligible as candidates for newer paradigms of experimentation?

I agree that a principal use of experiments is to generate facts, but in view of what was said above, what kind of experiments will generate world-facts? I have a suspicion that such an 'experimental' method has already been with us, in our understanding life, and rather than refine this, are we perhaps too hastily accepting the paradigm of experimentation as it exists in the physical sciences?

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Towards Food and Nutrition Security
C Gopalan

Poverty and Food Security
Toward a Policy System for Food Security
Yoginder K Alagh

Some Experiments with Food Stamps
M H Suryanarayana

Fertiliser Use Efficiency in Indian Agriculture
Vidya Sagar

Towards Food and Nutrition Security

C Gopalan

While the challenges involved in ensuring food and nutrition security relate to both the production and distribution of food, inequitable distribution rather than inadequate production is the major factor underlying India's current problem of malnutrition. The inequality cannot be corrected through exercises in tokenism and populist 'give away' programmes but only through creation of and support to income generating skills among the poor.

An attempt is made in this paper to examine the current status of different states with respect to their levels of Nutritional Status and 'Social Development', using data derived from NNMB and NFHS. Attention is drawn to the problems posed by ongoing urbanisation and the emergence of an expanding middle class. The prospect of the country having to bear a double burden of problems - of urbanisation at one end of the income spectrum and of undernutrition at the other end - is examined.

I
Introduction

DURING the last few decades, there have been some significant gains with respect to the nutritional status of India's population. Acute large-scale famines which used to occur with distressing periodicity till the 1940s of this century have now been eliminated, thanks to (a) increased food availability at the overall national level (b) better early warning systems facilitating rapid transport of foodgrains to needy areas, and, more than all to (c) an alert administration and press. Acute food shortages in pockets of distress caused by natural disasters are now being handled more efficiently.

The population of India had increased from 442.3 million in 1960 to 884.4 million in 1992. Foodgrain production had nearly kept pace with population growth, and as a result per caput foodgrain availability had not declined. The prophecies of gloom of the 1960s [Paddock and Paddock 1967] were fortunately belied, thanks to the timely advent of the green revolution.

However, while average per capita foodgrain availability now nearly corresponds to per caput requirements, in view of gross iniquities with regard to food distribution, a large proportion of poor households do not have access to adequate food. We are therefore, witness to the cruel paradox of satisfactory buffer stocks of foodgrains (reported to be about 37 million tonnes as per the latest estimates) on the one hand, and pockets of undernutrition on the other. India's nutrition problem is thus not so much one of lack of foodgrains at the overall national level, but of lack of adequate access to food in over (at least) 30 per cent of poor households whose family incomes are so low, that even if 70 per cent of that family income is spent on food, nutritional needs are not met. We will return to this aspect later in this paper.

II
Food Production

Though the situation with request to foodgrain production seems satisfactory, complacence may not be warranted, our current huge buffer stocks notwithstanding. The five major aspects with respect to food production that should demand our attention from the point of national food and nutrition security are:

(1) correction of prevailing distortions in the pattern of food production;

(2) laying the groundwork for successful exploitation of the new emerging tools of biotechnology and genetic engineering for optimising our food production capabilities.

(3) protection and conservation of our land resources for food production;

(4) protection and conservation of our water and marine food resources, and

(5) improvements in storage, processing and preservation of foods and in their quality control.

Pattern of Food Production

Optimal nutrition will demand the intake of a wide range of foods, which taken together and in judicious combination (in a well balanced diet) can provide the essential nutrients that we need. Ensuring good nutrition is not just equivalent to avoidance of hunger. While the latter can be achieved through the intake of a single staple cereal, the former will demand besides cereals, an adequate supply of other foods such as pulses, vegetables and fruits and milk. While, understandably, we may be immediately concerned with efforts to stave off hunger among the poor, our long-term goal must be the achievement of an optimal state of nutrition for our people, which will help them find full expression to their genetic potential. Nutrition security is much more than food security; the former will involve our having to broaden and diversify our food base.

The green revolution despite its striking success in the matter of augmentation of wheat and rice output had brought about some distortions in the pattern of food production. Two major distortions which are important from the nutrition point of view deserve special attention.

Pulse/legumes production has shown no significant gains, with the result that the per caput availability of pulses has sharply declined; and the prices of pulses have escalated to levels beyond the reach of the poor. This is bound to be reflected in a sharp decline in the protein quality of diets in poor households. The answer to this does not consist in fortification of cereals with lysine; but in overcoming current bottlenecks to augmentation of pulse/legume production. Pulses are not merely a good source of lysine (deficient in cereals) but also a good source of riboflavin also generally deficient in predominantly cereal-based diets. It must be pointed out that the prevalence of vitamin B complex deficiencies (and especially of riboflavin deficiency) in our children and women is high and indeed considerably exceeds the prevalence of vitamin A deficiency [MR 1995]. Legume cultivation, as part of crop rotation, is also beneficial to soil.

Horticultural development had also not received adequate attention, and as a result micronutrient deficiencies have now come to the fore. This is sad, considering the country's rich biodiversity and the bewildering varieties of fruits and vegetables that nature has endowed it with.

New Horizons

New challenges and opportunities for augmenting food production are now unfolding with recent advances in biotechnology, and genetic engineering. Given our rich biodiversity and our large scientific manpower, we are richly endowed with the capabilities to respond to the new challenges. Research designed to identify high nutritive-value varieties of fruits and vegetables and genetic engineering with a view to maximise yield and nutritive value of a wide range of foods, will need to be supported. In an earlier publication [Gopalan 1989], I had referred to the several opportunities that the new biotechnologies offer in this regard and I shall not go into further details on this aspect here.

The use of high analysis chemical fertilisers, which is part of the modern intensive agricultural technology, had not always gone in hand-in-hand with appropriate measures for soil testing and soil replenishment, with the result that, as shown by studies of FAO (1982), there are

disturbing evidences of micronutrient depletion of soils in some areas; these are likely to be eventually reflected in impaired nutritive value of foodgrains grown in such soils. Our precious land resources must be preserved and their continued fertility must be ensured.

All this, however, are not arguments against the green revolution, as such, which had saved many developing countries, including India, from the prospects of severe food scarcity; rather they are arguments for institution of appropriate corrective measures to overcome the distortions in the pattern of food production consequent on the new agricultural technologies.

Industrial plants located in the vicinity of banks of rivers in the country are now discharging effluents containing potentially toxic pollutants, which may be contributing not only to the observed diminution in fish catches but also to metallic and toxic contamination of fish [Gopalan 1952]. A whole array of industries, such as pulp and paper, textiles, tanneries, sugar, distilleries, shellac, hydrogenated vegetables oils, coal washeries and petrochemicals are located in the banks of rivers and streams and are discharging such effluents.

The most notable metallic pollutants derived from such industrial establishments are mercury, lead, chromium, cadmium, copper and zinc. These contaminants are not only likely to persist over a long period but they are also generally water soluble, non-degradable and strongly bonded to polypetides and proteins. The source of mercury is generally chloralkali plants which manufacture chlorine and caustic soda. Mercury is extremely toxic to fish and man.

Lead finds its way into rivers and ponds from the wastes of industries manufacturing storage batteries, cable sheathing, pigments, water pipes etc. Cadmium pollution arises from industries manufacturing kitchen utensils and glazed potteries. Zinc, chromium and copper poisoning arises from effluents of metallic industries, mines and dye industries, and leather and explosive industries. Our impressive riverine and marine food sources should be zealously guarded and protected, and the current degradations must be arrested.

At present a considerable part of food produced perish for lack of adequate facilities for storage and good preservation. Fungal contamination of cereals, loss of food through pests and rodents, and wastage of fruits and vegetables currently take a heavy toll. The answer to my mind is not food irradiation which may sound a 'modern' and scientific approach; but which, in my opinion, is not a desirable procedure at least as far as staples are concerned. Simple, safe village-based decentralised technologies for preservation and processing of food are already available; and need to be refined, reinforced and propagated. Simple methods of dehydration of vegetables for storage and use in lean seasons will go a long way towards promotion of consumption of green leafy vegetables (GLVs) and fruits and towards combating micronutrient deficiencies. Facilities for collection of vegetables at production points in the villages, for the removal of non-edible portions, for blanching of edible portions and packaging in polythene bags for distributing through a chain of outlets in urban and semi-urban areas will go a long way in reducing the price of vegetables and increasing their consumption. These operations can easily be undertaken by village co-operatives.

With urbanisation and change in occupational pattern, 'convenience foods' and ready-to-eat foods will be in increasing demand. Safe and inexpensive indigenous technologies will need to be developed for this purpose. Agro-based industries with large employment potential may need to be developed in order to achieve these objectives. Most importantly, current methods for ensuring quality control of foods need to be strengthened and refined.

III
Food Distribution

Now to return to the subject of inquitable distributions of food and inadequate access to it on the part of millions of poor households in the country.

Problem of Poverty

India's Planning Commission had estimated that in 1987-88, 29.9 per cent of India's population (then numbering 238 million) lived below the 'poverty line', the poverty line being the expenditure required to acquire the estimated minimum calorie requirement of 2,400 Kcals per capita daily in rural areas and 2,100 Kcals per capita daily in urban areas [Venugopal 1995]. The expert committee on poverty of the Planning Commission, on the other hand, using somewhat different yardsticks, had estimated the population of 'poor' in the country to be 39.34 per cent or 313 million [GOI 1995].

These estimates are based on approximations and assumptions that may be debatable. The expert committee referred to above had also pointed out that there were significant inter-state differences with respect to food prices and therefore with respect to poverty levels. Despite doubts and possible uncertainties, these estimates from an official committee of the Planning Commission (not a group of 'anti-establishment activists') provide a broad indication of the magnitude of poverty in the country. It must, however, be remembered that estimates of 'poverty' need not necessarily be considered as being equivalent to estimates of 'undernutrition'. As Meera Chatterjee (1995) points out: "not all who are 'poor' are malnourished; and not all who are malnourished are 'poor'". Perhaps an even more direct indication of

Table 2 Gender Differences in Child Nutrition
Per Cent Distribution of Boys and Girls under Four Years according to Nutritional Status
(NNMB Data, 1988-1990 and 1974-1979)

State	Nutritional Status (Weight-for-age)			
	<-- D3SD		<-- D2SD	
	Male	Female	Male	Female
Andhra Pradesh	27.2 (36.4)	29.8 (34.7)	61.3 (68.4)	60.2 (65.4)
Gujarat	36.0 (39.9)	37.7 (47.5)	67.4 (74.9)	67.3 (73.9)
Karnataka	31.0 (33.3)	31.6 (39.7)	64.4 (71.3)	67.5 (71.9)
Kerala	9.3 (27.1)	14.8 (30.6)	47.1 (63.1)	38.6 (59.3)
Madhya Pradesh	41.3 (49.4)	43.1 (43.1)	72.0 (71.3)	67.8 (70.1)
Maharashtra	20.6 (38.4)	27.2 (42.9)	60.0 (73.9)	60.1 (71.2)
Orissa	30.5 (30.4)	40.7 (36.6)	65.4 (62.9)	73.2 (62.0)
Tamil Nadu	19.1 (33.4)	26.3 (35.9)	56.1 (64.6)	57.0 (68.1)

Note: Figures in parentheses correspond to 1974-79 values

Table 1 Ranking of States according to Nutritional Status and Energy Consumption
(NNMB Data, 1988-1990 and 1974-1979)

State	Ranking* acc to Nutritional Status	Nutritional Status of Children < 4 Years (Per Cent)		Ranking** acc to Energy Consumption	Average Consumption of Nutrients (Cu/day) (At Household Level)	
		<-- D2SD	<-- D3SD		Energy (KCal)	Protein (g)
Kerala	1 (1)	42.5 (61.2)	11.8 (28.9)	6 (7)	2140 (1978)	52.9 (46.4)
Tamil Nadu	2 (3)	56.6 (66.3)	22.6 (34.7)	7 (5)	1871 (2275)	45.6 (54.8)
Maharashtra	3 (7)	60.1 (72.8)	24.0 (40.6)	5 (3)	2211 (2300)	61.7 (64.5)
Andhra Pradesh	4 (4)	60.7 (66.9)	28.4 (35.6)	4 (2)	2340 (2447)	55.7 (59.8)
Karnataka	5 (6)	65.9 (71.6)	31.3 (36.4)	2 (1)	2431 (2932)	65.4 (79.3)
Gujarat	6 (8)	67.2 (74.4)	36.9 (43.4)	3 (6)	2375 (2162)	69.3 (64.2)
Madhya Pradesh	7 (5)	68.9 (70.8)	41.8 (41.3)	1 (4)	2614 (2283)	82.5 (71.5)
Orissa	8 (2)	69.5 (62.8)	35.7 (33.2)			

Notes: Figures in parentheses correspond to 1974-1979 values
* Rank of the state with lowest per cent of undernutrition = 1
** Rank of the state with highest level of energy consumption = 1

the extent of food deprivation may be the observation of the expert committee that nearly 19 per cent of rural households, and over 6 per cent of urban households had reported that they were not getting two square meals a day for either part or the whole of the year [GOI 1975].

While these findings are depressing, there are indications that despite population increase the proportion of population below the 'poverty line' has been declining, though perhaps not as rapidly as one would wish. Thus the expert committee referred to above had estimated that poverty as per its estimation had declined from 55 per cent in 1973-74 to 39 per cent in 1987-88.

While there may have been no spectacular decline in overall poverty, disaggregated data on family income levels in poor income groups as reported by NNMB (1991) seem to indicate that 'abject poverty' may have declined as reflected in a shrinkage in the proportion of population with the lowest (of low) income levels.

The fact that there has been a near-total disappearance of florid manifestations of undernutrition like classical kwashiorkor and keratomalacia, beri-beri and pellagra which were once major public-health problems in some parts of the country would support the conclusion that there has been a decline in abject poverty. The periodic surveys carried out by the National Nutrition Monitoring Bureau show that 'severe malnutrition' in under-fives as reflected in weights/age less than 60 per cent of standard has also significantly declined [NNMB 1991].

While these gains are gratifying, the fact remains that the country has still a long way to go before it can be legitimately claimed that adequate progress towards eradication of iniquities has been achieved. Recent gains that may have accrued at the macro-economic level through policies of globalisation and 'liberalisation' have yet to be significantly reflected in better nutritional status of the poor. The 'trickle-down effect' is not as yet manifest and perhaps, it is too soon to expect such results. Apparently there are still quite a few blocks in the 'conduit' from the top to the bottom! 'Lateral inputs' in the form of welfare measures now being resorted to are therefore necessary at least in the immediate present. However, such measures while being welcome, are of the nature of 'relief and repair operations' and cannot be the final answer. The final answer must lie in ensuring for even poor households, income levels adequate to meet their basic minimal requirements for food, clothing and shelter. This challenge cannot be evaded and there are no short-cuts. The 'right to food', 'clothing and shelter' is perhaps the most important of all human rights, being related to human survival itself.

In this context, the ongoing anti-poverty and welfare programmes, such as ICDS, and the more recent ones such as the mid-day meal programme in schools, are important initiatives; but their efficacy in alleviating undernutrition even in the short run will very much depend on how well these programmes are targeted to benefit the really needy groups, and how efficiently (and honestly) they are implemented. The recent bold initiatives towards decentralisation of administration, through the creation of elected empowered village panchayats all over the country with 30 per cent of the elected seats reserved for women, may help ensure that the benefits of the welfare programmes really reach the poor.

Public Distribution System

A major instrument for ensuring equity in the matter of food distribution is the Public Distribution System (PDS). In a recent masterly analysis of this system, Venugopal (1995) drew attention to some of the glaring deficiencies in the system. He argued that the prevailing agricultural and food pricing policies may have contributed to the observed progressive decline in the offtake of foodgrains from the fair price shops of the PDS during recent years (Fig 1). A good part of central food subsidies, according to him benefit the farmer and go to meet the management costs of buffer-stocks, rather than to benefit the consumer. The consumption of cereals, as estimated by the National Sample Survey, 48th round of 1994, had declined from 14.4 kg in 1987-88 to 13.5 kg in 1992. The offtake of foodgrains through PDS had declined from 16.64 million tonnes to 12.57 million tonnes in 94-95 (Fig 1). It is hoped that the 'revamping' of PDS initiated in 1992-93 will yield results in due course.

In view of these disturbing trends, there is clearly a need to look deeply into ways of improving the PDS so as to ensure that its benefits are targeted to the poor and needy. In order to do this we need to have reliable data on the profile of the present users of PDS, of the relative offtake different foods offered through the system, and of possible factors contributing to the poor utilisation of this service – data of the type which Venugopal himself had collected for Andhra Pradesh.

Among the many possible explanations for the poor offtake of foodgrains through the PDS, apart from the reasons suggested by Venugopal, there is also a possibility that a good proportion of the 'non-poor' who were earlier availing themselves (needlessly) of the PDS facility, have now stopped doing so finding that the price differential between the PDS and the open market is not all that attractive. Should this be the case, it may turn out the poorer offtake may actually indicate better targeting (however unintentioned).

In this connection it must be pointed out that while the benefits of recent globalisation and liberalisation initiatives have still to become manifest as far as the poor are concerned, there has been a rapid expansion of the ranks of the affluent middle class. While precise estimates are hard to come by, it has been suggested that the affluent middle class may number over 200 million. It is possible that many of these were once users of the PDS but not now. It is to be hoped that the expansion of the middle class is an early manifestation of the trickle down effect and will be reflected in due course in a progressive shrinkage of the ranks of the poverty stricken in the country.

There is yet another aspect that needs to be taken into account in considering the data reflecting poor offtake from PDS. It must be pointed out that even the highest level of offtake of foodgrains from the PDS at any time represented only a small fraction of the total foodgrains that must have been consumed by the poor. This will be evident from a simple arithmetic calculation based on SRS data regarding average daily per capita intake of foodgrains, and the estimates of the total population below the poverty line. Since it may be unreasonable to assume that the poor prefer the (marginally) more expensive open market to PDS, it may seem logical to conclude that a large proportion of the poor – made up of agricultural labourers and small landholders are 'eating off the land', and their food consumption figures are not reflected in market transactions. Under the circumstances it may be practical and prudent to strengthen and provide support to the prevailing (off-

Table 3: Ranking of States according to INSD*

State	INSD Value	Rank
Kerala	0.7406	1
Punjab	0.5719	2
Haryana	0.5717	3
Tamil Nadu	0.5585	4
Gujarat	0.5525	5
Maharashtra	0.5484	6
Karnataka	0.5128	7
West Bengal	0.5010	8
Andhra Pradesh	0.4702	9
Assam	0.4647	10
Orissa	0.4559	11
Rajasthan	0.4557	12
Madhya Pradesh	0.4359	13
Uttar Pradesh	0.4146	14
Bihar	0.3779	15

Notes: * Index of nutrition and social development. See appendix for statistical note by Manoj Kumar Rai on INSD.

(i) The concerned components for calculating INSD are available for the above 15 states only (NFHS 1992-93). The ranking orders will change once the data for all states become available.

(ii) The life expectancy and the literacy rate for the above states have been estimated crudely from previous years' trends (figures).

market or non-market) practices that the poor have traditionally evolved and which they are currently practising for meeting their food needs and their survival.

It must be said in conclusion that the durable way of ensuring adequate food supplies to poor households will be not through hand-outs and welfare operations but through improving the capacity of the poor to earn their livelihood with dignity. This implies that the quality of human resource, represented by these households, will need to be improved through better health care and education. Again, as Meera Chatterji (1995) points out "improving nutrition cannot be relegated to welfare or populist philanthropy. It is the very essence of the development."

IV
Nutrition and National Development

The mutually synergistic interrelationship between improvement of nutritional status of a population and its overall socio-economic development is now well recognised. Optimal nutritional status is at once a means and the outcome of socio-economic development. Nutrition upliftment programmes must therefore be considered in the total context of socio-economic development.

International agencies have attempted to evolve a 'Human Development Index' which takes note of both economic status (as indicated by GDP) and social development (as indicated by educational attainment and health status); and on the basis of this index they have attempted to rank countries in the order of development [HDR 1995]. India figures among the 'low development' countries in this classification. Of all the 174 nations of the world listed in this exercise, India has been placed as 134th. This exercise has its obvious imperfections and limitations; but all the same provides a rough measure, albeit of debatable validity, of the order of development/underdevelopment. More importantly it reveals the persisting developmental gap as between the countries of Europe and North America on the one hand, and developing countries on the other; and thus provides a strong indictment of prevailing iniquities in the world economic order (disorder).

We will here attempt to briefly review the national nutrition scene in the context of overall social development. India is a vast country with marked inter-regional and intra-regional variations. An 'average developmental index' for the entire country will have little meaning and will provide no practical leads for action. We must at least be able to look at the different states of the Indian union individually.

There have been several small-scale surveys of health/nutrition in the country but the data from these may not be representative of the country as a whole. The two major national surveys which provide data related to nutrition covering large sections of the country's population are: (1) The surveys carried out by the National Nutrition Monitoring Bureau (NNMB) of the National Institute of Nutrition, Hyderabad [NNMB 1991, 1980] and (2) The recent National Family Health Survey (NFHS 1993). The data derived from these surveys have their limitations and are not strictly comparable. The NNMB surveys cover only 8 states of the country and the latest data pertain to 1991. The NFHS covers a much wider area but the emphasis here being on reproductive health, data related to nutrition are somewhat limited. The National Sample Survey in its several rounds collects data on food expenditure but these are not recent.

Apart from the above, the Indian Council of Medical Research has carried out large-scale countrywide studies on maternal and

TABLE 4: STATEWISE COMPARISON OF NUTRITIONAL STATUS AND MORTALITY RATES OF CHILDREN UNDER FOUR YEARS
(NFHS data 1992-93)

State	Sex of Child	Nutritional Status (wt-for-age) Per Cent		Mortality Rates (Boys and Girls Pooled)			
		< -3SD	< -2SD	Neo-Natal	Infant (Per Cent)	Child (Per Cent)	Under 5 (Per Cent)
Andhra Pradesh	M	13.8	47.1				
				45.3	70.4	22.4	91.2
	F	17.5	51.1				
Assam	M	19.4	52.4				
				50.9	88.7	58.7	142.2
	F	18.0	48.5				
Bihar	M	25.7	55.5				
				54.8	89.2	42.0	127.5
	F	24.7	48.5				
Delhi	M	12.7	41.6				
				34.9	65.4	19.0	83.1
	F	11.3	41.6				
Goa	M	8.7	35.6				
				20.6	31.9	7.2	38.9
	F	9.0	34.0				
Gujarat	M	15.0	41.6				
				42.3	68.7	37.9	104.0
	F	14.9	46.7				
Haryana	M	7.5	34.9				
				38.4	73.3	27.4	98.7
	F	10.8	41.6				
Himachal Pradesh	M	11.2	47.8				
				34.2	55.8	14.1	69.1
	F	14.8	46.1				
Karnataka	M	18.4	52.9				
				45.3	65.4	23.5	87.3
	F	20.5	55.8				
Kerala	M	5.4	28.8				
				15.5	23.8	8.4	32.0
	F	6.9	28.3				
Madhya Pradesh	M	17.6	53.0				
				53.2	85.2	49.3	130.3
	F	20.4	49.1				
Maharashtra	M	18.5	51.3				
				36.4	50.5	20.9	70.3
	F	22.0	54.0				
Orissa	M	22.0	53.4				
				64.7	112.1	21.3	131.0
	F	23.6	53.2				
Rajasthan	M	18.4	42.5				
				37.2	72.6	32.3	102.6
	F	20.2	40.5				
Tamil Nadu	M	11.5	43.1				
				46.2	67.7	20.1	86.5
	F	13.8	49.7				
Uttar Pradesh	M	19.3	51.8				
				59.9	99.9	46.0	141.3
	F	19.2	47.8				
West Bengal	M	16.4	52.9				
				51.8	75.3	26.0	99.3
	F	18.3	56.6				

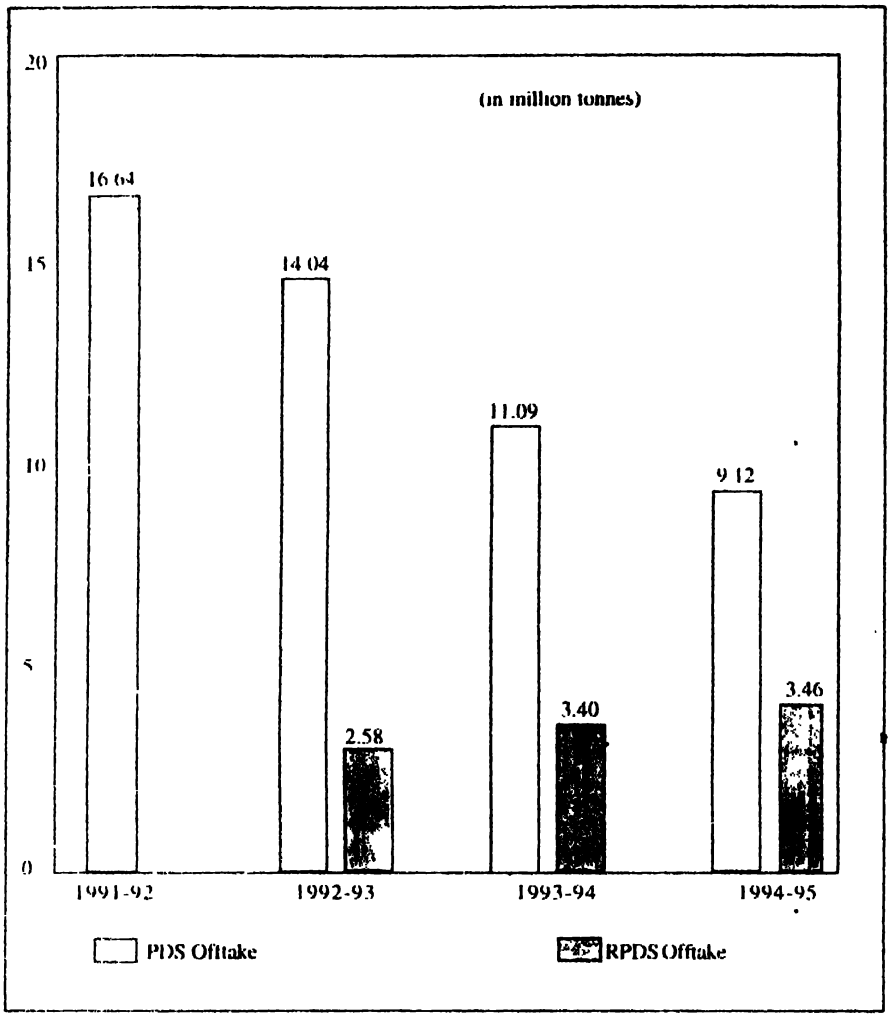
infant nutrition and the reports of these studies have been presented in important reports [ICMR 1990, 1992]. An attempt has been made in this paper to rank different states of the Indian union on the basis of such criteria as (a) life-expectancy; (b) 'knowledge' as reflected by literacy level and years of schooling; and (c) nutritional status of the under-fives. This categorisation does not take into account the 'economic development' criterion for each state as this is difficult to determine with reasonable precision. Besides this, this exercise attempted here has several other limitations. Even so, it may provide some measure of the prevailing order of social development and of the profile of health/nutrition status of different states of the country. It must however be remembered that within each state (intra-state) iniquities are often glaring and the order of intra-state iniquities may differ, as between different states. As such 'average figures' for a whole state may not reflect a true picture. These possibilities are fully recognised.

For the purpose of the present analysis of the latest available information on national nutritional status, the data from the NNMB (1980, 1991) and NFHS (1992) have been used. A detailed critical analysis of all these data is being undertaken by the Nutrition Foundation of India and the results thereof will be reported separately in a special publication of the Foundation later. Only a few brief comments are presented here.

NNMB Surveys

NNMB had brought out two valuable reports containing the results of its surveys at two points of time 1974-79 and 1988-90. The computation of undernutrition in children using anthropometric indices had been earlier carried out using the conventional IAP (Indian Academy of Paediatrics) system of classification wherein the degree of undernutrition (deficits in weight for age) was expressed in terms of percentage of the median standard. In line with more recent practice, NNMB has now reanalysed its raw data and has now converted these original computations in terms of percentage of children with weight/age falling below either < 2 SD or <-3 SD of the standard (Z score system). The values for percentage of children with weight for age falling below <-3 SD are bound to be significantly higher than the estimates of 'severe undernutrition' arrived at with the use of the earlier 'IAP' approach wherein weight/age deficits were expressed as percentage of the standard (< 60 per cent), the cut-off points in the two approaches are different and the estimates therefore are not comparable. Failure to understand this significant difference in estimates arrived at by the two different approaches may lead to the erroneous and alarming inference that 'severe malnutrition' in children in the country has increased (which certainly is not the case).

Figure 1: Public Distribution System: Offtake



The NNMB data from the two surveys pertaining to eight states of the Indian union have been indicated in Tables 1 and 2. The states covered in the survey have been 'ranked' 1 to 8 (the best being 1 and the worst 8) with respect to 'nutritional status' as measured by the prevalence of undernutrition in children and 'food consumption' as measured by calorie intake per consumption. Some of the salient findings may be summarised as follows:

(a) The most recent survey report (1988-90) indicates that between 42.5 per cent under-fives (in Kerala) and 69.5 per cent (in Orissa) could be considered as undernourished using the <-2 SD of median (Z score) criterion; between 11.8 per cent (in Kerala) and 41.8 per cent (in Madhya Pradesh) were below -3SD.

(b) There has been a significant decline in the prevalence of undernutrition in children in all but one state (Orissa) between 1979 and 1989 – a 10-year period, the decline being most striking in Kerala and least striking in Madhya Pradesh. The situation in Orissa in 1989 was actually worse than in 1979.

(c) The prevalence of 'severe malnutrition' was marginally higher in girls than in boys in all states surveyed (Table 2). The rather curious and inexplicable finding was that the increase in the prevalence of 'severe malnutrition' in girls as compared to boys was marked in Kerala – a state considered to be the most (socially) progressive. On the other hand, when prevalence of all grades of malnutrition (including mild, moderate and severe <-2SD) was considered as a whole, the girls were generally better off than boys in all states (including Kerala) except Orissa. This would suggest that the neglect of the girl child is probably more with respect to the promptness with which medical attention is sought during illnesses (which generally tend to convert 'moderate' malnutrition into the severe form), rather than in the matter of general sharing of the family food pot as between boys and girls.

(d) A striking finding was the lack of parallelism between average household

calorie and protein consumption in a given state on the one hand, and the prevalence of undernutrition in its children on the other. Thus the state which showed the best record (the lowest prevalence) with respect to undernutrition in children, namely Kerala, was the poorest with respect to the household food consumption; per centre, the state with a fairly poor record with respect to prevalence of undernutrition in children (Madhya Pradesh) showed the best figures for household food consumption. (Figures for household food consumption from Orissa were not available.) This would suggest either (a) that intra-familial distribution of food was more unfavourable with respect to children in states like Madhya Pradesh as compared to Kerala or (b) that infections which contribute to malnutrition are more promptly and efficiently combated in a state like Kerala with better health care system than in states like Madhya Pradesh with poorer health care system. Moreover 'average' figures of consumption may not necessarily reflect actual consumption; the distribution of consumption data may perhaps reflect a better picture.

(e) There is a direct relationship between the level of energy consumption and protein consumption. This is to be expected considering that the main source of calories and of protein is nearly the same – being a single staple cereal with insignificant amounts of fat (calorie rich) and protein rich foods like pulses or meat.

The NFHS data do not provide information on food consumption but include figures regarding child mortality rates. Using NFHS data an attempt has been made to evolve an Index of Nutrition and Social Development (INSD) with respect to different states (Table 3). The statistical note prepared by M K Rai on INSD is provided in the Appendix.

The salient features which emerge from these data can be summarised as follows:

(1) The reported prevalence of undernutrition in children ('total' as well as 'severe') in all states was considerably less than those indicated by the NNMB reports. It seems unreasonable to assume that the difference in the prevalence of undernutrition of the order observed can be totally accounted for by the fact that there was an interval of nearly five years between the latest NNMB report and the NFHS data. The difference may be attributable to the fact that the sampling designs were different, apart from the fact that NFHS operations covered far more states than what the NNMB had done. It would seem reasonable to argue that NNMB operations largely confined, as they were, to the rural poor, captured relatively poorer and more deprived sections of the country's population than what the NFHS study did.

Whatever may be the explanation, and irrespective of which of the two surveys is truly representative of the country, the NFHS data provide a less depressing picture of the state of child nutrition in the country than the NNMB data. The prevalence of overall undernutrition ranged from 28 per cent in Mizoram and Kerala to 63 per cent in Bihar – generally considered among the most backward from the point of view of health/nutrition; severe malnutrition likewise ranged from around 6 per cent in Kerala and 5 per cent in Mizoram to 31 per cent (again in Bihar).

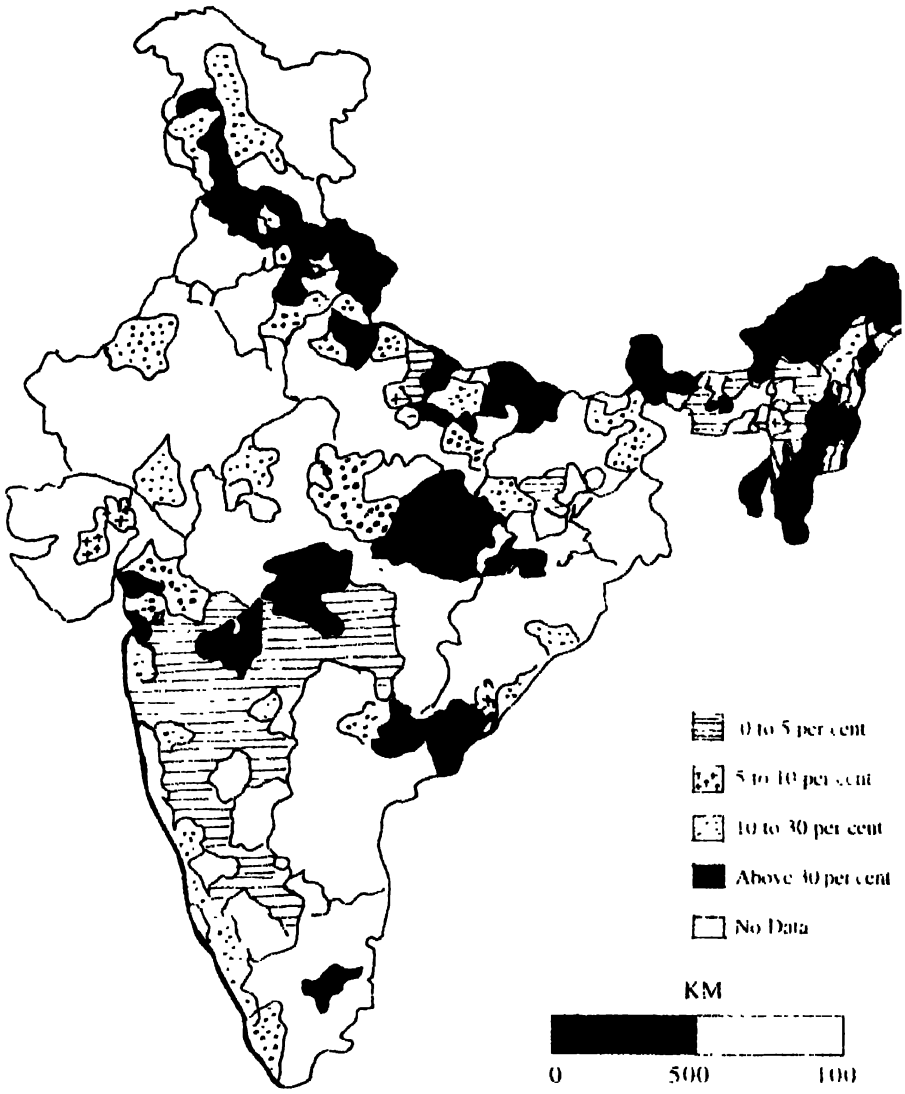
(2) Gender differences with respect to both total and severe undernutrition appear even less remarkable than in the NNMB data, and the girl-child does not seem to be worse off than her counterpart in most states.

(3) Neo-natal mortality ranged from 15.5 per 1,000 live births in Kerala to 54.8 in Bihar with Madhya Pradesh closely following with 53.2. Infant mortality rates also followed the same pattern with Bihar being the worst. Under-five mortality was 32 in Kerala as against 130 in Madhya Pradesh, Bihar and Orissa. On the basis of all these data it would appear that Bihar, Madhya Pradesh and Orissa would rank among the most backward and Kerala, Goa, Manipur, Nagaland and Mizoram among the best of the states surveyed.

(4) There is generally a rough correspondence between performance with respect to child mortality and child nutrition in most states. States with the lowest child mortality rates have the lowest prevalence of child malnutrition (e.g. Kerala, Manipur, Nagaland, and Goa), while those with the worst performance with respect to child mortality (Orissa, Assam, Bihar and Uttar Pradesh and Madhya Pradesh and Rajasthan being also the worst with respect to child nutrition.

In this connection, it may be mentioned that the NFHS data also provide a more favourable picture of demographic indicators such as the Sample Registration System (SRS). This would again raise the question of the relative representativeness of the different survey samples.

FIGURE 2: PREVALENCE OF IODINE DEFICIENCY DISORDER



V
Specific Nutritional Problems

Data from community studies show that a distressing level of over 30 per cent of all infants born in India are of low birth weight (< 2.5 kg) reflecting maternal malnutrition and consequent intrauterine growth retardation. Recent advances in our knowledge indicate that low birth weights in full-term babies carry not only serious short-term implications (e g, increased neonatal mortality and growth failure) but also long-term implications in adults (e g, increased susceptibility to diabetes and coronary heart disease in adult life).

The latest ICMR (1990) surveys compared to earlier studies show that there has been no significant improvement with respect to the incidence of low birth weight deliveries, though there are some hospital-based data which suggest improvement. It is important that the factors underlying the high incidence of LBW deliveries are identified and the problem effectively combated.

Perhaps the most widespread nutritional deficiency disease in the country is iron-deficiency anaemia, which though not spectacular in its manifestations contributes significantly towards impairment of functional efficiency, immunocompetence and learning ability. In women of the reproductive age group, it is a major factor contributing to maternal morbidity and mortality. It may also be an important factor responsible for the incidence of low birth weight deliveries referred to above.

Extensive studies carried out under the auspices of the Indian Council of Medical Research had shown that the current strategy for combating anaemias of pregnancy through the distribution of iron-folate tablets to pregnant women in the last trimester of pregnancy has made a limited impact. It is clear that some additional inputs are necessary.

There has been an intensification of efforts to control goitre and iodine deficiency disorders in recent years. The earlier bottlenecks for production of adequate amounts of iodated salt have been cleared by the decision to end the state monopoly for the production of iodated salt. The earlier practice of providing subsidies to private manufacturers for the iodation of the salt has now been withdrawn; it is gratifying that despite this the overall production of iodised salt in the country does not seem to have suffered. Even so, logistic problems with respect to several important components in the chain of operations involved in goitre control have not been totally eliminated. The problems of ensuring quality-control of the iodation process and of ensuring adequate levels of iodine at the level of actual consumption are still formidable and have not been fully solved. In the meanwhile, the emergence of new areas of goitre-endemicity has introduced a new dimension (Fig 2). The reasons for such emergence are not clear. Whether soil iodine depletion consequent on modern agricultural technologies or whether new goitrogens – natural and commercial are involved remains to be satisfactorily elucidated.

There has been a steep decline in the incidence of severe clinical forms of vitamin A deficiency (kerotamalacia) in recent years. The statement that kerotamalacia and vitamin A deficiency are a "major cause of blindness" in the country is just not true. We do see milder forms of vitamin A deficiency. The strategy of promoting administration of massive doses of synthetic vitamin A, as a prophylactic measure was introduced in India over 25 years ago when keratomalacia was a major public health problem which it is not at present. It is unwise and unnecessary to continue to depend on this approach as mainstay for the control of vitamin A deficiency in our mothers and children. The problem of vitamin A deficiency can and must be successfully combated and controlled through the judicious use of carotene-rich foods abundantly available in the country.

The logical approach for combating vitamin A deficiency is to promote the consumption of green leafy vegetables and other carotene-rich foods by mothers in the last trimester of pregnancy, when there is significant transfer of maternal vitamin A to the foetus. Improvement of maternal diets through the inclusion of carotene-rich foods will contribute not only to the betterment of the vitamin A nutritional status of the mother but also to improve hepatic stores of vitamin A in the infant; and possibly also towards augmentation of vitamin A concentration of breast milk of the mother during lactation. The use of massive doses of synthetic vitamin A in pregnancy is clearly prohibited because of the known teratogenic effects of such use.

Fortunately, India is blessed with a large array of carotene-rich vegetables and fruits which can be put to judicious use for this purpose. At present, however, these foods do not figure prominently especially in the diets of pregnant women and infants. Special efforts are necessary to overcome this situation. A recent claim [de Pee S 1995] based on a questionable study design, that the consumption of green leafy vegetables may not help to control the vitamin A deficiency, will not stand scientific scrutiny.

However, some practical steps will be necessary in order to promote the consumption of carotene-rich foods in the habitual Indian diets. There are wide varietal and locational differences with respect to carotene content and carotenoid profiles of these foods, as also with respect to their content of other nutrients. It is important to identify varieties of good nutritive value and culinary properties and acceptability and selectively propagate them. This was done in the case of wheat and rice with great success. Seeds of such good varieties must be widely distributed in order to promote home gardens. Also there is a need to identify appropriate culinary practices which will improve the acceptability of green leafy vegetables (GLVs) and will help in retaining their nutritive value. Considerable research is called for in these areas, which are currently neglected. There is also a need to identify strategies for large-scale production of carotene-rich foods, and especially of GLVs, and for developing appropriate village-based techniques for their dehydration and storage for the avoidance of wastage and for use in lean seasons, and for use in large-scale supplementary feeding programmes – such as those of the ICDS and school meal programmes. In these later programmes, the inclusion of GLVs must be made mandatory. Innovative ways of making this feasible will have to be worked out.

It is not often realised that the incidence of vitamin B complex deficiencies in our mothers and children in our country is much higher than that of vitamin A deficiency. Recent multicentric studies of ICMR have clearly shown this. It is strange that international groups "who are very active" with respect to vitamin A deficiency are silent with respect to vitamin B complex deficiency.

The important message that emerges from the fact of the presence of multiple deficiencies in our poor income groups is that the answer with respect to their intervention does not lie in the pharmaceutical (drug-based) approach of distributing a few vitamins (singly or in combination) but in bringing about overall dietary improvement. Recent studies have in fact shown that foods (especially plant foods) contain besides nutrients, a wide array of bioactive photochemicals such as antioxidant blocking agents, etc, which play important roles in the prevention and control of 'non-nutritional' diseases. It will be difficult to devise a pill or a tablet which cam mimic the protective and preventive actions of natural foods.

VI
Emerging Challenges

Recent developments point to the emergence of new dimensions to the food/nutrition problem.

The ongoing migration of rural populations to urban areas (the urban population in India may well exceed 300 million by the turn of the century) introduces new dimensions. Urbanisation involves social changes in family structure, in living styles, in occupational pattern and dietary practices. These challenges must be addressed.

Appendix A
A Statistical Note

Manoj Kumar Rai

The calculation of the Index of Nutrition and Social Development (INSD) in the present paper is based on three variables – longevity, knowledge and nutritional status of children under four years of age. In this case, the economic criterion (the GDP) has not been included since reliable statewise data for the same is not available. INSD is thus an index of nutrition and social development.

The index sets a fixed range (maximum and minimum) for each dimension and shows where each segment of population (state in the present case) stands in relation to these scales – expressed as value between 0 and 1.

With respect to the knowledge component, rather than considering 'mean years of schooling', as was done in the case of the Human Development Index (HDI) by UNDP, we have used 'median years of schooling' as the criterion. This median has a range (0,15) years.

For calculation of the nutritional component of the index, the international reference yardstick – NCHS – has been used. The percentage of children >-2SD of NCHS standard has been treated as the percentage of healthy children. This percentage has a range (0, 100).

The INSD is a composite index of the indices of life expectancy, knowledge and nutritional status. The longevity index and the knowledge index have been calculated using the same method as followed by UNDP in the calculation of Human Development Index (HDI). As stated earlier, we have considered median years of schooling instead of mean years of schooling. The nutritional index has been expressed as

$$\frac{\text{Per cent of children above cut-off point}}{100}$$

To illustrate, INSD for boys for Andhra Pradesh (NFHS 1992-93) was calculated as below (using crude estimates of variables)

(1) Life expectancy (estimated) = 59.4 years

$$\text{Longevity index} = \frac{59.4 - 25.0}{85.0 - 25.0} = 0.573$$

(2) i) Estimated literacy (per cent) = 56.7

$$\text{Literacy index} = \frac{56.7 - 0.0}{100.0 - 0.0} = 0.567$$

ii) Median years of schooling = 3.8

$$\text{Index for median years of schooling} = \frac{3.8 - 0}{15 - 0} = 0.253$$

Index of knowledge = 2/3 (0.567) + 1/3 (0.253) = 0.462

(3) Nutritional status:

Per cent of boys <-2SD = 47.1

Per cent of boys above the cut-off point = 100 – 47.1 = 52.9

$$\text{Nutritional index} = \frac{52.9 - 0.0}{100.0 - 0.0} = 0.529$$

$$\text{Thus, INSD} = \frac{0.573 + 0.462 + 0.529}{3} = 0.521$$

With the progressive expansion of the ranks of the middle class, there has been a progressive increase in the incidence of diseases related to malnutrition (as opposed to undernutrition among the poor). The problem of obesity and of degenerative diseases are gathering disturbing dimensions with the result that the country may have to carry a double burden of problems of overnutrition at one end of the economic spectrum and the poor and problems of undernutrition at the other end.

With increasing awareness of the importance of nutrition, increasing attempts at commercial exploitation of malnutrition by commercial interests – both national and international must be expected. Some of the false international leads designed to promote drug based (as opposed to food-based approach) to the solution of our nutrition problems are examples of such attempts at commercial exploitation. Within the country itself, the mushrooming of a large number of slimming joints promising rapid weight reduction regimes using hush-hush slimming and dieting procedures are yet another example of commercial exploitation. These aberrations are likely to gather further momentum in the years to come and will need to be combated effectively.

Thus, as we move into the next millenium formidable challenges and opportunities with respect to improvement of the nutritional status of our population will unfold. It is to be hoped that we would be able to summon the wisdom to use these opportunities and to respond to these challenges.

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Poverty and Food Security

Toward a Policy System for Food Security

Yoginder K Alagh

This paper assesses recent estimates of the incidence of poverty, and outlines the nature of an information and modelling system required by a food security system.

THIS note attempts to assess recently available estimates of the percentage of the population below the poverty line in rural and urban areas in India. It also attempts to outline the nature of an information and modelling system required to effectively follow food security and related employment guarantee scheme policies, and the role of estimates of the proportion of the population below the poverty line in such estimates. Finally, the alternative policies are outlined in a schematic form.

Identification of Poor

The identification of the poor is an important issue, and the present work on it needs considerable improvement. For example, in the current fiscal year if food prices are computed from the Wholesale Price Index until November 19, 1994 (for which I could get data), the increase is 11.6 per cent as compared to an increase of 10.6 per cent in the overall price level. During the last one year the Consumer Price Index for industrial workers and agricultural labourers has increased at a rate twice that for non-manual employees. An increase in food prices makes the poor relatively worse off, as the classic study by Radhakrishnan and Sarma has shown.[1] A faster increase in food prices would make the poor justifiably feel relatively more deprived. With high food stocks and large foreign exchange reserves, these trends could have been avoided; the finance ministry must monitor these trends more closely and put into force remedial policies. Our concern is with the identification of the poor in a manner such that in a period of structural reform, targeted groups can be quickly isolated and remedial policies adopted.

The expert group on estimation of proportion and number of poor of the Planning Commission (for brevity expert group) has missed a good opportunity to provide an analytical framework and data base for the next round of food security and employment policies.[2] They have instead come out with a brittle report, conceptually confused and empirically thin, giving numbers making no economic sense and with only the lightly veiled objective of 'insisting' that poverty levels are different. The world over 'expert groups' are identifying the hard core poor and their empirical correlates and developing policies of direct intervention and institutional reform to help them. Recent international conferences show the richness of the material.[3] The Indian report however stays aseptically away from relevance and has as a consequence also created no 'expert' waves.

Beginning with a literature review, the expert group states that the "early 1970s generated a rich and extensive literature on poverty", and that the "Task Force on Projections of Minimum Needs and Effective Consumption Demand, January 1979, was able to bring together at one place the results of some of these studies and redefine the poverty line". (Since the present author was the chairman of this group for brevity we shall call it the Alagh task force.[4]

The Alagh task force made four important recommendations, two of which have been accepted by the expert group. First, the poverty norm at 2,400 Kcal per person for rural areas and 2,100 Kcal for urban areas, or the poverty line, is "anchored in a given calorie norm and the corresponding all-India consumption basket for 1973-74". Second, it developed a procedure for updating the poverty norm for years for which household consumption surveys were not available. The expert group was "in favour of using the same", as far as these practices are concerned.

A third recommendation was based on one of the most detailed demand and income distribution studies done anywhere in the world. Taking account of household budgetary survey data, price information and aggregate consumption patterns, it developed the income and price response of both poor and rich households separately in rural and urban areas. This was very powerful work done by a set of brilliant Indian econometricians – R Radhakrishna, the late G V S N Murthy, Dipankar Coondoo and P B Gupta. K C Majumdar and I integrated the work with policy models. This meant that income supplementation and public distribution policies working through pricing and dual markets (an open market and a rationing system) could be integrated quantitatively into commodity market and parastatal policies specifically aimed at households below the poverty line. The late D T Lakadawala[5] and the present author[6] have written about this extensively. The price elasticities of rich and poor Indians in rural and urban areas attracted Lakadawala immensely, for price theory, common sense and a concern for the poor were his forte up to the last day of his life. For example, it has been shows that if price elasticities of the kind contained in Table 1 are known and a target of public distribution is given, it is possible to derive the open market share which would give the producer a price required to ensure long-run supply from an efficient firm.[7]

The draft Sixth-Plan stated:

> It would be desirable to adopt a system of dual pricing in respect of selected goods of mass consumption. The rationale of such a policy is derived from the fact that price elasticity in respect of essential commodities, cereals, pulses, edible oils, is relatively higher for persons below the poverty line, both in urban and rural areas.[8]

The fourth recommendation of the Alagh group was to define a modified poverty line of hunger; this was the contribution of Sukhatme. The expert group strangely gives data in an annexure to show that the population proportions of hunger are less than 20 per cent, but does not say anything substantive about this in the main report. They also have nothing to say on the behavioural aspects of consumption of poor households. This is important since 'well behaved' results validate results, and if the expert group had worked on this some numbers they present could have been avoided. For example, the elasticities reported in Table 1 conform to the well known requirements of demand theory, which enhances 'confidence' in the numbers.

The regional structure of the workforce shows considerable variation. Table 6 shows that the states in which male workers in rural areas have both a lower percentage than the national level in the agricultural sector (i e, less than 74 per cent) and a higher percentage in the manufacturing sector (more than 7.6 per cent) are Kerala, Jammu and Kashmir, Tamil Nadu, Rajasthan, Gujarat, Punjab, Haryana and West Bengal. Of the states listed above only Tamil Nadu, Gujarat, West Bengal and Haryana have over 30 per cent of the male

labour force in urban areas engaged in the manufacturing sector. These regions will have a diversified labour force structure by the end of the 1990s. For the country as a whole the percentage of workers dependent on agriculture has fallen from 70.7 in 1977-78 to 63.9 in 1987-88 as per the National Sample Survey, and that in the manufacturing sector has gone up from 10 to 11.13 per cent in the same period. Since rural labour is around two-thirds, if less than 70 per cent of the rural male workers are in the agricultural sector and above 30 per cent of the urban workers are in manufacturing, the region may be regarded as diversified occupationally in India. Table 6 shows that in the same year in Tamil Nadu 31.1 per cent of the male and 41.2 per cent of the female labour force is in the urban manufacturing sector, but in that state according to the group, 43.88 per cent of the urban population is poor – much higher than the national average of 40.12 per cent. In Gujarat, 33.4 per cent of the male urban labour force is in manufacturing, and in Haryana 30.9 per cent compared to 26 per cent for the country, but according to the expert group in both states urban poverty is higher than rural poverty

The empirical results of the expert group need considerable discussion. They come out with the somewhat strange result that rural poverty in India is less than urban poverty in 1987-88 – a drought year. Table 5 shows that according to them, urban poverty in that year was 40.12 per cent and rural poverty 39.06 per cent of the population. This is particularly so in some of the most advanced industrial states of India. As the table shows, according to the group in 1987-88 in some of the worst hit states in the drought year, rural poverty was much lower than urban poverty Thus, in Andhra Pradesh, rural poverty was 20.92 per cent but urban poverty was 44.63 per cent. In Gujarat, rural poverty was 28.67 per cent and urban poverty 39.63 per cent. In Karnataka, another badly hit state, rural poverty was 32.82 per cent but urban poverty 49.06 per cent. In Kerala, the corresponding numbers were 32.82 and 49.06 per cent. The same relative structure according to the group obtained in some of the poorest states. In Bihar, the numbers were 52.63 and 57.71 per cent, in Madhya Pradesh 41.92 and 48.17 per cent. States which have high industrial growth rates and where the structure of the labour force has been transformed, urban poverty rates are also higher than rural poverty rates, according to the group. This is a 'surprising' result in itself and should have raised many questions when estimated for states such as Gujarat, Maharashtra, Karnataka and Haryana.

The industrialised states with high urban poverty, according to the group, have high proportions of urban male labour force in the manufacturing sector (25 to 30 per cent) and low and declining shares of agriculture in labour force. Sheela Bhalla[9] and I[10] had made the point in the mid-1980s that a structural transformation of the labour force has begun. Later work, including by a member of the expert group, confirmed that this transformation is on account of labour demand pull factors.[11] Hence the expert group's numbers on high urban poverty in these states need close scrutiny. They also have estimated 'facts', such as that urban poverty in Gujarat in some years is more than in Assam, or that poverty in Tamil Nadu is more than in Uttar Pradesh, and in West Bengal more than Bihar (Tables 2, 3 and 4).

The expert group does not make any serious comment on the discrepancy between National Account and National Sample Survey estimates of per capita consumption expenditure, apart from relying only on the latter. This is a serious

TABLE 1: PRICE ELASTICITIES FOR SELECTED ITEMS

	Rural		Urban	
	For Persons Below Poverty Line	For Persons Above Poverty Line	For Persons Below Poverty Line	For Persons Above Poverty Line
Cereals	–0.73	–0.30	-0 66	0 04
Pulses	–0.83	–0.44	-0.87	-0 19
Edible oil	–0 63	–0.63	-0 96	-0 31
Sugar	–0.84	–0 63	-0 91	-0 33

TABLE 2: NUMBER AND PERCENTAGE OF POOR BASED ON POVERTY LINES - 1973-74

States/UTs	Rural		Urban		Combined	
	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons
Andhra Pradesh	178.21	48 41	49.31	52 56	227 52	49 25
Arunachal Pradesh	2.57	52 67	0.09	37 16	2 66	51 96
Assam	76.37	52.67	5 5	37.16	81 87	51 23
Bihar	336.52	62.99	33.27	51.75	369 79	61 78
Goa	3.16	46.85	0.98	36 88	4 14	44 04
Gujarat	94.61	46.35	41 09	49.31	135 7	47 21
Haryana	30 08	34 23	812	39 58	38 2	35 24
Himachal Pradesh	9 38	27 42	0.35	13 2	9 73	26 4
Jammu and Kashmir	18 41	45.51	2.95	30 4	21 36	42.59
Karnataka	128 40	55.14	41 85	52 01	170 25	54 34
Kerala	111 36	59.19	23 97	62 24	135 33	59 71
Madhya Pradesh	231 21	62.66	45 63	58 34	276 84	61 9
Maharashtra	210.84	57.71	74.99	42.96	285 83	52 94
Manipur	5 11	52 67	0 75	37.16	5 86	50.01
Meghalaya	4 88	52.67	0 64	37.16	5 52	50 25
Mizoram	1 62	52 67	0 2	37.16	1 83	50 33
Nagaland	2 65	52 67	0.25	37 16	2 9	50 87
Orissa	142.24	67.28	12.38	56 29	154 62	66 24
Punjab	30.47	28 21	9.92	27.68	40 4	28 06
Rajasthan	101.41	44 76	27.63	53.15	129 04	46 33
Sikkim	1.09	52 67	0 1	37 16	1 18	50 91
Tamil Nadu	172.60	57.43	73.79	54.47	246 39	56.51
Tripura	7 88	52 67	0 66	37 16	8 54	51 03
Uttar Pradesh	449.99	56.53	84.87	59.48	534 86	56 98
West Bengal	257.96	73 16	41.14	34.5	299 1	63 49
UTs						
Delhi	1.06	24 44	20 5	49 17	21 56	46 85
A and N Island	0.59	57.43	0.17	54.47	0 76	56 72
Chandigarh	0 07	27.68	0.76	27 68	0 83	27 68
D and N Haveli	0.37	46.85	0.01	36.88	0 38	46 65
Lakshadweep	0.18	59.19	0.03	62.24	0 21	59 61
Pondicherry	1.61	57.43	1.25	54 47	2 86	56 09
All India	2612.91	56.44	603 12	49 23	3216 03	54 93

Source: Government of India, Perspective Planning Division, Planning Commission *Report of the Expert Group on Estimation of Proportion and Number of Poor*, Government Press, Faridabad, 1993.

done of such differences by Mukherjee in 1972 concluded that "without an intensive study of the discrepancy between the two sources of consumption data, it is not possible to conclude in favour of either". The arguments of their classic study are still valid but have not been discussed at all. This is particularly so when the expert group recognises that "NAS based estimates are higher by a very large factor for commodity groups like sugar, edible oils, clothing and footwear, durable consumer goods and rent, fuel and power" and that "NSS based estimates of cereals are higher than NAS based estimates". In the 1980s cereal consumption has not been rising but sugar, etc, consumption has been rising very fast – as also aggregate calorie consumption per capita.

The 1980s record a much faster growth of agro-based consumption in the Indian demand basket. For example, per capita consumption of sugar goes up from 6.2 to 12.5 kgs/year (Table 7), and that level is not only much higher than in comparable countries, but also than in countries which have much higher levels of per capita income. Also, there has been a very rapid increase in consumption of non-crop based commodities like eggs, milk and forest based products. Egg consumption per capita goes up from 15 to 26 per year in the period 1975-90. In the same period, India crosses per capita textile consumption of 20 metres per year in cotton equivalents, reaching 24.8 metres/year in 1990-91. Thus, expansion and diversification of the consumption basket is basically driven by a higher growth performance in the 1980s.[12] This in turn leads to another problem. Demand driven growth and diversification would be in serious jeopardy if the 1990s persist in low rates of aggregate growth. It needs to be noted that the agro-based items of consumption are important in the demand baskets of different income groups.[13] These consumer items are not for elite consumption alone (Table 7).

The increase in average calorie consumption in India is from about 1,981 Kcal in the early 1960s to around 2,235 Kcal in the late 1980s (Table 8). With this record it would be difficult to justify poverty rates as high as 38 per cent, particularly when it is being argued that income distribution is more or less invariant through time. The average intake of the Indian has gone up by over 10 per cent in the last three decades. The highest improvement as we see in Table 8 is in the 1980s. (For the purpose of this calculation Akroyd conversion factors have been used. Foodgrain, edible oil, sugar, milk, eggs, meat and fruits and vegetables consumption have accounted for 50 cal/person/day; 50 cal

[illegible] There is no evidence to suggest that consumption inequality has increased in India. In fact if at all the evidence is the other way around. The nutrition and hunger situation has definitely improved. The procedure of state level price adjustment basically using state level consumption weights and all-India prices may have led to the problem in their estimates, in addition to the question of 'missing calories'.

The real issue of behavioural and spatial correlates of poverty at a level of disaggregation still needs examination, and it is no wonder that the policy approximations of a Yugandhar or a Venugopal have been more illuminating than some 'expert estimates'. The world over, poverty research is reaching a level where empirical work and modelling helps in developing food security and targeted employment augmentation programmes. Indian academia has to catch up. It has been decided that the PDS should be concentrated in areas (taluks) with concentrations of nutritionally at risk persons (mainly landless labourers). While the new [illegible] line are not very helpful, the country can now mount a decisive attack on the hunger problem. In the selected blocks a management information system to monitor food prices, availability, and the nutritionally at risk population should now be operationalised. ICAR and agricultural universities should also join a national effort to eradicate hunger in these areas with realistic technological and institutional answers. In the medium term local agricultural plans must also be integrated with food security objectives.

Information System Requirement

The requirement of work to develop information systems in light of the above description will be three-fold – the first exercise to be done will be of a policy kind. These will outline the relationship among economic reform policies, the strategy of agricultural policies being developed, and food security policies. The emphasis here will be on pursuit of market policies to improve availabilities and distribution

Table 3 Number and Percentage of Poor based on Poverty Lines - 1977-78

States/UTs	Rural		Urban		Combined	
	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons
Andhra Pradesh	149 13	38 11	51 64	46 46	200 77	39 96
Arunachal Pradesh	3 26	59.82	0 12	37.58	3.39	58 55
Assam	97 55	59 82	6 7	37.58	104 25	57.63
Bihar	364 48	63 25	39 95	52.17	404 43	61 95
Goa	2 72	37 64	1 17	36 66	3 88	37 34
Gujarat	92 53	41.76	41 33	43 13	133 86	42.17
Haryana	26 43	27 73	8 97	36 24	35 4	29 48
Himachal Pradesh	12 46	33 49	0 58	19.47	13 04	32.45
Jammu and Kashmir	19 04	42.86	3.61	31.89	22 65	40 63
Karnataka	120 39	48 18	50 17	52.88	170 57	49 47
Kerala	102 85	51 48	26 09	59 54	128.94	52.93
Madhya Pradesh	247 98	62 52	58.07	62.05	306 05	62 43
Maharashtra	249 75	63 97	81.20	40.61	330.96	56.06
Manipur	6 09	59 82	1 11	37 58	7.20	54 83
Meghalaya	6 10	59.82	0 79	37.58	6.89	56 04
Mizoram	2 03	59 82	0 32	37 58	2.35	55.38
Nagaland	3 44	59 82	0.35	37 58	3.79	56.74
Orissa	162 5	72 38	14 53	53.55	177 03	70.35
Punjab	18.87	16 37	11 49	27 64	30.36	19.36
Rajasthan	89 66	35 89	28.99	46.36	118 64	37 99
Sikkim	1 41	59 82	0 15	37 58	1.55	56.69
Tamil Nadu	182 50	57.68	79.77	53.23	262.26	56.25
Tripura	9.95	59.82	0.76	37.58	10.71	57.41
Uttar Pradesh	407.41	47 6	98.42	57.07	505.83	49.19
West Bengal	259.69	68.34	51.55	38.71	311 24	60 65
UTs						
Delhi	1.35	30.19	16.72	33.33	18.07	33.07
A and N Island	0.71	57.68	0.22	53.23	0 93	56 56
Chandigarh	0 08	27.64	0.96	27.64	1.03	27.64
D and N Haveli	0.33	37.64	0.16	36 66	0.49	37.32
Lakshadweep	0.13	51 48	0.07	59.54	0.21	54.09
Pondicherry	1 65	57.68	1.48	53.23	3 13	55 49
All India	2642.46	53.07	677.4	47.4	3319.86	51.81

Source. As in Table 2.

channels, particularly in areas with less developed infrastructure. The minimum degree of government intervention of a physical kind – distribution of food and subsides in kind, given equity objective – will have to be determined. The study will have to begin with a reasonable description of the existing institutions involved in decision-making roles regarding food security like ministries, parastatals, etc, and changes taking place in these roles. Also, the set of economic policies towards agriculture to ensure steady improvement in food availability will need to be worked out as a part of increasing reliance on market policies in the sector. This part of the work will require policy analysis, synthesis of existing studies and development of operational food security policies. It will include high level policy judgments to develop indicators for decision-making as outlined above, also the nature of demand for food security analysis required in the next phase, for example commodity coverage of policies and nature of interventions expected.

The second set of work requirements will relate to data requirements of the decision needs spelt out above. Again this work will need to be spelt out in detail. The third set of work requirements will relate to models and information system formats. Quantitative models of different kinds will be needed to 'forecast' base level indicators in a consistent manner. Generally information on prices and quantities for recent periods will not be known. For example, as of December 1994 there is a little information on the outcome of the summer crop of 1994. Three additional formal models may be required. The first will be optimal stocking models under uncertainty. The second will be policy models with government policies working through food demand and supply – market determined models. The third kind will be questions of development of information systems both for numeric and file based systems in an effcient manner.

Decision-Making System for Food Security

Assuming that a careful analysis of food availabilities and vulnerable sectors of the population is completed, we now turn our attention to the requirements of decision-making for a food security system.

National level decision-making

The national decision-making level will be pivotal for food security. Major critical decisions will have to be made at this level. Illustrative kinds of decisions will be as follows:

(i) Purchase of food items in international markets, or establishing access, for example through 'future' markets, or recourse to bilateral or multilateral agencies, for example 'food aid' or 'cereal facilities';

(ii) Decisions on adjustment of domestic stocks through national policies. These may include purchase or sale of public stocks and attempts to influence private inventories, as also the related question of desired levels of domestic prices of food items;

(iii) Use of support prices, tariff mechanisms and domestic taxes, restrictions and subsidies;

(iv) Optimal internal stock movements and the related question of domestic availabilities and price spreads in regional markets;

(v) Access and vulnerability question of classes of consumers, for example in mofussil areas, or categories like women, children, the unemployed and the destitute or disabled;

(vi) Short-run decisions relating to financing, credit and foreign exchange requirements of operational food policies.

(vii) Decisions with a medium-term horizon like assessment of food demand, incentives and support policies for domestic producers, development of improved processing and marketing infrastructure, standardisation, nutritional and quality aspects, and employment and income supplements for marginal populations and areas.

It is quite obvious that national decision systems support will be required at core economic policy-making centres relating to food security, for example the cabinet, finance ministry, planning ministry and in this case the civil supplies, rural development and agriculture ministries. Second, the same will be required for sectoral levels, for example health ministry and local government ministry Finally, national level parastatals and institutes may require such information, such as the Central Bank, agricultural bank and nutrition and agricultural technology related institutions. It needs to be noted that while the decisions and agencies taking them have been listed separately, the information system itself will play a co-ordinating and integrating role. A decision to import, for example, has

Table 4 Number and Percentage of Poor based on Poverty Lines 1983

States/UTs	Rural		Urban		Combined	
	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons
Andhra Pradesh	113 46	26.53	56.07	40 13	169 53	29 88
Arunachal Pradesh	2.72	42 60	0 13	26 38	2 85	41 40
Assam	81.28	42.60	6.06	26 38	87 35	40 86
Bihar	415 90	64 37	50 05	50 42	465 95	62 51
Goa	1 14	14.81	1 09	27 20	2 22	19 05
Gujarat	73 49	29 80	47.26	40 63	120 76	33 27
Haryana	22 14	20 56	7.71	23 48	29 85	21 24
Himachal Pradesh	7 11	17 00	0 33	9 25	7 44	16 39
Jammu and Kashmir	13 02	26.04	2.40	17 14	15 42	24 10
Karnataka	100 32	36 33	52 31	43 37	152 63	38 47
Kerala	84 32	39.03	25 61	48 65	109 93	40 91
Madhya Pradesh	213.53	48 90	65 85	54 59	279 38	50 13
Maharashtra	193 17	45 23	98 62	40 57	291 79	43 54
Manipur	4 71	42 60	1 13	26 38	5 84	38 08
Meghalaya	5 00	42 60	0 74	26 38	5 74	39 46
Mizoram	1 72	42 60	0 41	26 38	2 13	38 14
Nagaland	3.08	42 60	0 41	26 38	3 49	39 75
Orissa	163 42	67.53	18 37	50 61	181 79	65 32
Punjab	16 74	13.20	12.37	23 86	29 11	16 29
Rajasthan	96.96	33 50	33 31	40 37	130 28	35 02
Sikkim	1 23	42 60	0 17	26 38	1 41	39 62
Tamil Nadu	181 77	53 99	84 63	49 22	266 41	52 38
Tripura	8 40	42 60	0 65	26 38	9 06	40 79
Uttar Pradesh	442 76	46 45	144 78	50 27	557 54	47 19
West Bengal	266 65	63 05	50 45	32 21	317 10	52 72
UTs						
Delhi	0 35	7 66	18 64	28 32	18 99	26 97
A and N Island	0 85	53 99	0 30	49 22	1 15	52 68
Chandigarh	0 07	23.86	1 20	23 86	1.27	23 86
D and N Haveli	0 16	14 81	0 02	27.20	0 18	15 64
Lakshadweep	0.09	39.03	0 09	48 65	0 18	43 48
Pondicherry	1 57	53.99	1 76	49 22	3 33	51 36
All India	2517.15	45.61	752 93	42 15	3270 08	44 76

Source: As in Table 2.

to be based on simultaneous consideration of expected international and domestic prices and availabilities, both with government and likely behaviour of private trade. While the output for the decision makers of the decision support system will be a select list of indicators required by him, in these will have to be integrated processes of reasoning and analysis. These will be in the nature, to the extent possible, of a comprehensive set of models, but will most certainly consist of a set of sub-models operationalised at the level of international markets, the national market, regional markets and different segments of the population. Core scarcities will have to be incorporated; for example, in the short run domestic and foreign exchange resources, transport and marketing infrastructure, and in the medium term sustainable land water resources availabilities, estimated demands and policy generated parameters emerging from the structural adjustment programme and, in particular the nation's projected agricultural strategy for the 1990s

State level decision-making

At the state level the requirements of information for decisions will be more direct and pressing. These will include data of a continuous kind on prices and quantities marketed in agricultural markets and retain prices by location. If base level models show, as is likely, a relationship between local food production and local prices, then estimates for area, production and yield and forecastes for the current agricultural season will be required. Data on government stocks and movements will be needed. If possible, effort should be made to develop indicators of private stocks. Direct data from trade channels is a possibility Alternately, stock movements or market arrival or turnover data may be used. If none of these are available, estimates may have to be inferred from price data and movements in it, for which a back up relational model may be required. At the market level, it will be important to standardise in terms of quality, weight and related considerations. Quality noise can distort price data in a significant manner.

On the demand side, population and work force data will be required by location, sex and age-distribution. Forecasts for post-census years will be necessary. Bench mark analysis of household budgetary surveys of the kind conducted by statistical survey agencies or the nutrition survey of the kind undertaken by the National Nutrition Institute will be used to prepare indications of 'vulnerable' or 'at risk' segments of the population. Their magnitude and location will have to be constantly updated.

Again modelling effort will be required. Three kinds of efforts can be anticipated. The first will be attempts at updating data bases with historical information being continuously updated in a reasonably accurate manner, ensuring consistencies with currently available information of a limited kind. The second will be behavioural modelling, for example of demand-supply markets and price impacts. The third requirement will be aggregating of market information to regional and national aggregates. This is a complex problem since the regions are open economies.

Information requirements for medium term decisions at the state level will be of very high priority, as they would relate to higher levels of efficiency and capabilities of the system to meet food security needs through time. Three kinds of broad requirements can be indicated to outline the nature of work requirements for the information system for decision support. Each would need considerable operational detailing. The first would relate to expansion of suply potentials, the second to marketing, trading, distribution and information infrastructure, and the third to improvements in access to food by different segments of the population.

Information on expansion of agricultural supply potential at the state level would be available in the five year plan. In our context, this would relate to expansion of land and water availabilities either through investment plans or improved efficiency of water use.

For food security the important question will be the medium term economic price incentives, access to improved and cheaper inputs, and credit policies, such that the economic environment is to encourage expansion of agricultural potential or improved use of existing resources for food crops. Such policies would vary depending on the agro-climatic regime, for example in the different soil and water regimes: they would also vary between the old lands and those recently reclaimed – as also those areas which primarily depend on canal irrigation and those on ground water use or both.

TABLE 5: NUMBER AND PERCENTAGE OF POOR BASED ON POVERTY LINES - 1987-88

State/UTs	Rural		Urban		Combined	
	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons	No of Persons (Lakhs)	Per Cent of Persons
Andhra Pradesh	94 89	20.92	72 88	44 63	167 77	27 20
Arunachal Pradesh	2 73	39 35	0 11	17 34	2 84	37 47
Assam	80 86	39 35	4 58	17 34	85.44	36.84
Bihar	370 36	52 63	69 48	57 71	439 84	53 37
Goa	1 32	17 64	1 42	33 71	2 74	23 42
Gujarat	75 95	28 67	52 63	39 63	128 58	32 33
Haryana	18 75	16 22	7.15	17 79	25 90	16.63
Himachal Pradesh	7 37	16 28	0.25	6 18	7 62	15 46
Jammu and Kashmir	13.96	25.70	2.40	14 82	16.36	23 20
Karnataka	93 96	32 82	68 39	49 06	162 35	38 14
Kerala	66 20	29 10	26 02	43.36	92.22	32 08
Madhya Pradesh	195 85	41 92	70 04	48 17	265 89	43.40
Maharashtra	185 59	40 78	108 59	38 99	294 18	40 10
Manipur	4 68	39 35	0 85	17 34	5 53	32 93
Meghalaya	4 89	39 35	0.59	17 34	5.48	34 60
Mizoram	1 68	39 35	0 33	17.34	2 01	32.52
Nagaland	3 05	39.35	0.35	17.34	3 40	34.85
Orissa	148.02	57 64	19.94	44.11	167 96	55.61
Punjab	16.78	12.60	7 77	12 91	24.56	12 70
Rajasthan	103 02	33 21	38.17	38 99	141 19	34.60
Sikkim	1 25	39.35	0.15	17 34	1 40	34 67
Tamil Nadu	160.67	45.80	82 54	43.88	243.20	45 13
Tripura	8 49	39.35	0.48	17.34	8.97	36.84
Uttar Pradesh	412 03	41.10	125.02	45.22	537.05	41.99
West Bengal	219.09	48.30	57.63	32.84	276 72	43 99
UTs						
Delhi	0 06	1.29	12.74	16.91	12 80	16 04
A and N Island	0.80	45.80	0.32	43.88	1 12	45 24
Chandigarh	0.40	12.91	0.76	12.91	0.80	12 91
D and N Haveli	0.21	17.64	0.03	33.71	0.24	18.71
Lakshadweep	0.06	29.10	0 12	43.36	0.18	37.26
Pondicherry	1.35	45.80	1 80	43.88	3.15	44.68
All India	2293.96	39.06	833.52	40.12	3127.48	39.34

Source: As in Table 2.

All the reform process strengthens itself the effort will have to be to work out operationally the concepts detailed in economics for agricultural strategy in the 1990s, namely, the long range marginal cost of agricultural supply potential in each region, and to encourage policies towards output prices and input availabilities and price to approximate this supply price objective. This would encourage peasant households to meet the desired output objectives, expand food supply possibilities as a part of this effort and more important, generate additional income and employment, which can come on the medium term only through widespread agricultural development.

The attempt will have to be to cost and economically evaluate water and land development schemes, since this would provide the information back up for implementing concrete policies for food supply and income/employment generation outcomes of an operational kind. Examples are given in the *World Development Report 1992* and in the investment proposals of the Agricultural Bank's national agricultural policy paper.

Marketing, information and distribution infrastructures relate with food security by ensuring access to available supplies in an efficient manner. Regional spreads in food prices emerge from market imperfections. Generally regions of food deprivation or access difficulties, i e, upper hills and rural areas outside the valleys and deltas, are also areas of poor communications and agriculture marketing infrastructure. Improved information on food prices is the first step, but wider and more efficient markets are very important. Modern communication and data networking facilities should be used not only to collate, analyse and transmit data from rural markets, but for interactive communication.

As the rural economy diversifies, there is every reason for the peasant in upper hills or other backward areas, for example, to have available to him data on prices of crops to be considered by him for sowing, in other regions and in other countries, with which his output will compete at harvest time. Thus extra superior long cotton prices in the Philippines or Pakistan may also be important for his decision.

Information systems will of course have to be built up on storage facilities, stock and movements of public stocks of food items. Efficient deployment of such stock through regions and time is important from the cost saving angle of public interventions. Inventory management under uncertainty and optimal transportation models become important here – as also improved storage processes. Seasonal aspects of the crop season and post-harvest assessments of stocks and prices are generally necessary for sound policy decisions.

Problems like iron deficiency in women, female rural illiteracy, low nutritional levels in some areas, and emerging trends of decline in protein/energy intake in some population segments hit by adjustment, may need to

TABLE 8: AVERAGE DAILY COLORIE INTAKE PER INDIAN

Year	Daily K Cal/Person
1961/63	1981
1969/71	2020
1979/81	2090
1988/90	2235

Source: Y K Alagh, Lal Bahadur Shastri Lecture, ICAR, 1994

TABLE 6: INDUSTRIAL DISTRIBUTION OF RURAL WORK FORCE, 1987-88

	Percentage Distribution of Work Force					
	Rural				Urban	
	Agriculture		Manufacturing		Manufacturing	
	Male	Female	Male	Female	Male	Female
All-India	73.90	82.50	7.60	7.50	26.00	26 90
Tripura	43.70	48.60	5.50	11.50	6.10	1.80
Kerala	52.20	53.70	10.70	23.70	20.70	20 30
Jammu and Kashmir	61.00	83.50	9.20	9.40	24.00	38.00
Tamil Nadu	64.70	74.90	13.70	14.10	31.10	41 20
Rajasthan	64.90	83.00	7.90	4.00	19.50	18.00
Himachal Pradesh	66.40	96.00	7.20	1.80	11.60	7.70
Gujarat	67.70	72.10	9.50	3.60	33.40	22.10
Punjab	68.10	74.40	9.80	5.50	29.80	14.00
Manipur	68.40	78.50	3.20	10.10	7.80	17.60
Haryana	69.80	88.60	8.70	2.60		19 80
West Bengal	70.80	56.70	9.60	27 30		25 10
Sikkim	73.50	85.70	1.80	0.40	4 40	2.80
Andhra Pradesh	73.90	80.70	7.90	8 10	20.00	28 30
Orissa	74.40	74.10	6.30	13.40	15.80	24 30
Maharashtra	75.10	90.70	7 40	2.80	29 40	21 60
Assam	75.20	77.20	2.10	4 50	9.30	5 80
Uttar Pradesh	78.40	90 50	7.30	3.90	23 00	22.60
Karnataka	79.30	83 90	6.30	9 60	24 60	30 50
Bihar	79.60	89.30	5.00	3 90	24 20	21 90
Meghalaya	83 50	90.20	1.60	0 70	6 90	0.80
Madhya Pradesh	85.10	90.50	4.90	5 20	21 70	27.50

Note. Rural male percentages add up to 100 per cent, some for rural females/urban males/and urban females each adding up to 100 per cent

Source: Y K Alagh, *Indian Development Planning and Policy*, Vikas, Delhi, 1994, pp 337-38.

TABLE 7: PER CAPITA CONSUMPTION OF AGRICULTURAL PROCESSED COMMODITIES IN INDIA

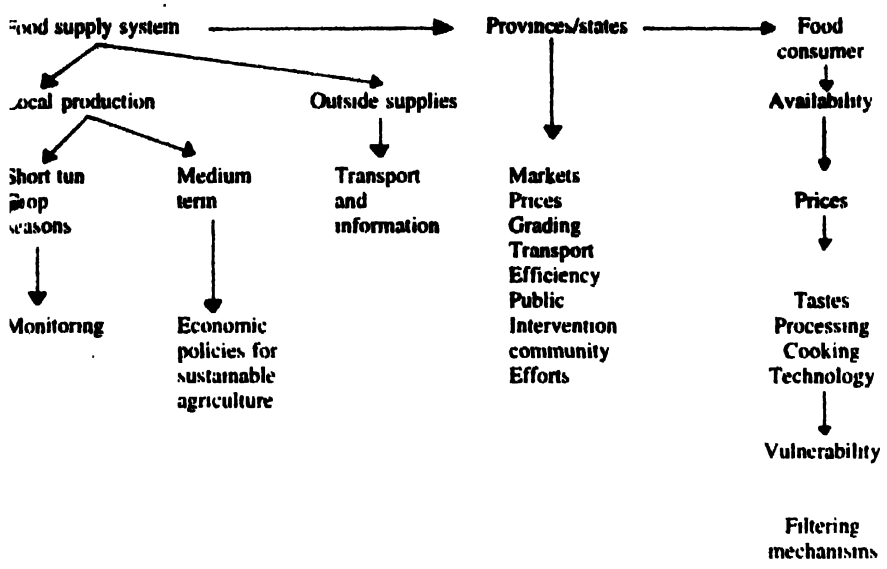
S No	Commodity	1955/56	1975/76	1990/91
1	Foodgrains (five year average of kgs ending with year)	155.6	158.5	180 6
2	Edible oil and vanaspati, kgs/yr	3.2	4 2	6 5
3	Sugar (kgs/yr)	5.0	6.2	12 5
4	Textiles (cotton equivalents) (metres/yr)	14 4	17 6	24.8
5	Tea (kgs/yr)	0.36	0 45	0 61
6	Milk (ltrs/yr)	4.7[1]	4.6[2]	6.3
7	Eggs (nos/yr)	5 3[1]	15 5[2]	26.0
8	Vegetables and fruits (Rs in constant prices) (per cent)		3 1[3]	5 2[4]
9	Plywood (per cent)		3 9[5]	10 3[6]
10	Paper and paperboard (per cent)		4 3[5]	7 1[6]
11	Newsprint (per cent)		4 0[5]	21 1[6]

Notes: 1 Refers to 1950/51.
2 Refers to 1980/81.
3 Annual compound growth rate 1972/77.
4 Annual compound growth rate 1977/86
5 Annual compound production growth in period 1972/83.
6 Annual compound production growth rate 1976/87.

Sources: 1 Rows 1 to 7, *Economic Survey*, 1991-92, Volume 2, pages S-24, S-26.
2 Row 1, columns 2 and 3, Alagh, 1991, p 3.
3 Row 8, D S Tyagi, *Managing India's Food Economy*, Sage, 1990.
4 D N Rao (1992), 'Economics of Forest Products in India: Issues and Perspectives' in Anil Aggarwal (ed), *The Price of Forests*, Centre for Science and Environment, Delhi, 1992.

A Availability Medium Term (three years)	
Alternative I	**Alternative II**
(1) Maintain as stated by the World Bank a long range marginal cost based agricultural price policy to achieve high agricultural growth such that the farmer gets an adequate rate of return on fresh investment and utilisation of existing capacity based on development of soil and waters. Align agricultural prices and input prices with global prices as in I and 2 alternative II. Intervene on either side if rates of return fall below required levels of World Bank recommended LRMC (long range marginal cost), work generally with tariff and tax policies; if absolutely necessary agricultural support prices and consequent purchases by parastatals to maintain such prices. The objective would be to maintain an economic environment in which agricultural supply potential expands by about 4 per cent annually (2) Align relative crop prices to international prices, but at the margin build in an edge for important food crops like wheat, oil and sugar (possibly milk?) Operate the system within the constraints of the GATT framework (3) Policies to be designed to improve the economic incentive structure for farmers; special care to be taken for new lands and areas of low capacity use. Emphasis on market based solutions. In well identified problem areas development of co-operatives and public investment packages, for example, completion and modernisation of canal systems, drainage policies, agricultural research and extension strategies. Development of agricultural markets, private channels for inputs, agricultural credit markets, etc. State may need to play demonstration role. (4) Phase out widespread public distribution systems, but maintain a minimum system for limited supplies of a small basket of commodities (bread, oil and sugar) to specified vulnerable sections of society, i e, poor households particularly in areas where hunger and anaemia incidence is higher, school children pregnant and lactating mothers in well defined areas.	(1) Adjust agricultural output and input prices to global prices and ensure availabilities at that level. Abolish quantitative interventions in domestic markets and import restrictions and export quotas. Phase out commodity and input trade by parastatals. Agricultural investment would depend on the impact of the emerging international economic environment for the agricultural sector in the developing world. At the present phase it is reasonable to expect that increased market orientation will improve resource use efficiency in agriculture. (2) Improve marketing channels such that import and export of specific commodities can be eased and made more efficient. Let international trade even out the impact of fluctuations in domestic output (3) Development of markets for agricultural produce and agricultural inputs. Reduction of tariff and tax barriers. Phasing out of state and parastatal activity. Research and demonstration role of state to continue. A minimum degree of regulation to continue, in view of environmental and other concerns (4) Abolish all distribution interventions in a phased manner
B Access	
(1) The widespread agricultural growth programme would generate employment/income. To be supplemented with special employment programmes integrated with rural/urban infrastructure - economic development programmes. Emphasis on voluntary organisations, community participation programmes. Selectivity to be ensured (2) Improvements in markets to ensure access to supplies at favourable prices (3) Nutrition education and technology programmes to improve access to nutrition with limited budgets. Emphasis on literacy, drinking water, women's programmes (4) Public distribution systems or intervention mechanisms like food stamps as a method of last resort Phasing policies will have to be worked out in each alternative	1, 2 and 3 as in Alternative-I
C Stability	
(1) Improve market channels so that inter-regional, inter-seasonal and inter-year price spreads are minimised (2) Introduce future markets to stabilise prices (3) Government inventory policies with domestic purchases and imports to work on the margin with well developed inventory management rules, to operate food prices in a specified band (4) Minimum supplies to be ensured on a regular basis in specified regions/for limited supplies to specified households/classes	1 and 2 as Alternative I
D Short Run	
(1) Use imports to even out fluctuations in domestic production of a selected basket of food commodities – in particular those in which limited public distribution for vulnerable sections is required. Such imports will supplement the domestic stocks which may emerge from the pursuit of an LRMC policy as outlined above (2) Develop optimal inventory and stocking policies with the aim of influencing food prices, particularly in backward areas. Work through markets (3) Design and work out optimal distribution policies with the objectives of minimising costs of public intervention mechanisms	(1) Let trade flows bring prices close to international levels, taking transport and distribution margins into account. At such prices supplies should be perfectly elastic.

FIGURE: SCHEMA OF INFORMATION SYSTEM



se isolated and reversed. Targeting of deliveries and social adjustment programmes of short run employment and income generation may need to be developed; data bases which will provide about market trends, information on successful community intervention strategies and filtering data mechanisms for isolating the truly needy populations at the household level will also be required. Information will also have to be planned for taste patterns, food storage, cooking and consumption habits and local technologies, either traditional or new, with application possibilities for resolving food gaps in an efficient manner. Delivery systems which work, particularly market channels integrated with community efforts or public objectives, will need to be actively searched for.

General Considerations

While decision-making requirements at each level will be specific, the data bases will need to be in a common format and with uniform concepts. This will introduce system design complexities. Aggregation will have to be conceptually possible both through space (village market – household – governorate – national – global) and real time (week – season – year – farmers' investment horizon of medium term). Coding and conceptual problems of a fairly complex kind will need to be planned for and resolved. Numerical data systems will have to be compatible with modelling as well as indicator requirements. In addition file-based systems of a non-numeric kind will also be required.

Preliminary List of Indicators

In view of the above discussion a very preliminary illustrative list of indicators to be developed by a food security information system is discussed below. This list is prepared by way of examples. In the first phase the emphasis will be on collecting information at the national level and developing information systems at this level. Such information of course has also a regional (rural/urban; state, market centre) component, but the purpose of the exercise will be a national food security decision system.

National level indicators for short run decisions

Some of the required indicators for short run decisions will be:

(1) Estimates of public stocks of food items; beginning/middle/end of each crop season; comparisons through years; deviation from desired level of stocks at different times of the year; location of stocks.

Notes: Desired level of stocks will be developed by inventory; risk adjustment on international markets/futures.

(2) Price trends of food items and comparisons with earlier years; seasonally adjusted trends; variation and spread between markets through space; wholesale-retail spread.

(3) Estimates of private trader stocks of food items at agricultural/wholesale market levels or inferences on them from price trends

(4) Crop output expectations.

(5) International price trends. For example, wheat in Chicago/Winnipeg/Argentina/Australia, etc; international stock change, future markets' trends

(6) Short-run domestic demand trends; fluctuations in income and impact.

(7) Weather fluctuations, disasters, food import indicators.

(8) Estimates of infrastructure relating to food performance; storage capacities; performance of milling industry/cold storage; transport; port capacities.

(9) Agricultural credit for trade/farm operations.

(10) Government decisions on support prices; relation to market trends/costs of production.

(11) Trends in food risk and nutritionally at risk segments of the population.

(12) Taxes/tariffs/quantitative restrictions on food movements; domestic and abroad.

(13) Major technological achievements relating to food availability, transport, processing.

(14) Food aid indicators.

Medium term indicators at national level

(1) Expected increase in agricultural potential in next three to five years; realistic assessments of plans.

(2) Expected trends in food crop acreages.

(3) Expected increases in demand for food items.

(4) Expected changes in price environment for agricultural sector: outputs/inputs.

(5) Policy adjustment expected in economic incentives to agriculture and their impacts particularly on food items.

(6) Expected developments in agricultural markets/storage/cold chains.

(7) Impact of economic policies on food demand.

(8) Likely trends in nutritionally at risk populations and their regional spread.

(9) Food aid trends.

(10) International price trends in view of policy changes expected – i e, GATT agreements.

(11) Major changes in regional demand/supply configuration in three to five years such as new cities, new agricultural lands, development and impact on food availability.

Conclusion

It is now important to review the food security systems in place in India and to more effectively target the existing policy instruments on the vulnerable sections of the population – but with a more general policy stance of maintaining food security as one of the objectives of the country's agricultural policy, as well as integrating rural employment policies with this objective. We sum up the alternatives available in the schematic framework in Table 9. Our own preference is for alternative I, but both are listed to clarify the issues for debate.

Notes

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6 Y K Alagh, *Indian Development Planning and Policy*, Vikas, Delhi, second edition, 1994, chapters 2 and 4

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Some Experiments with Food Stamps

M H Suryanarayana

The Indian government is considering food stamp programme as an alternative to the public distribution system in order to reduce the budget deficit with least social cost. This article recounts the experiences of such a programme in the US, Sri Lanka, Zambia and Jamaica and concludes that given the lack of proper socio-economic data on the Indian populace, it would be wise to confine the programme to urban locales.

CURRENTLY the government of India is faced with the problem of achieving macro-economic stability and structural adjustment at minimum social cost. This has called for, *inter alia*, a consideration of the alternative options to the public distribution system (PDS) for ensuring food securiy at least budgetary cost to the government. This is because of the following reasons. This is a subsidy which is largely unrestricted with respect to population coverage except the fact that food producers are not entitled in states like Kerala. It is administratively simple but inefficient and prohibitively expensive. The budgeted estimate of food subsidy for 1995-96 being Rs 5,250 crore, that is, more than the estimated budget deficit of 5,000 crore. Some major shortcomings of the PDS are: (i) considerable leakage of benefits to the non-poor population so that the variable cost compared with fixed cost of the PDS is very high; and (ii) the fixed cost component itself is very high because of the inefficiency of the Food Corporation of India (FCI) which handles a crucial portion of the PDS. There is also the potential cost in terms of a high inflation rate, reduction in invesitible resources for development and therefore inadequate growth of employment opportunities. These will adversely affect the poor more than the rich. From the point of view of structural adjustment also there is a need for a search for alternative options to the PDS. This is because the procurement and buffer-stock operations associated with the PDS introduce price distortions into the economy and therefore involves economic costs. The alternatives suggested [Bhagawati and Srinivasan 1993] and considered Government of India 1994] range from targeted PDS to a programme of food stamps. PDS retargeting will reduce variable cost and will be efficient if the saving is not outweighed by the increase in the cost of administering a targeted programme and does not involve exclusion of the needy poor. As for the food stamps, it has the following merits. The government can do away with the entire network of FCI and the fair price shops, and therefore, the associated budgetary cost to the government and the economic costs to the society. In this context, the Sri Lankan experience, where the government, faced with a situation similar to the Indian one, replaced the food distribution system by a non-price-indexed food stamp scheme and successfully reduced the budgetary cost and deficit to the government, is quite often cited.

This article attempts to survey the US experience, and experiments of Sri Lanka, Jamaica and Zambia that have attempted to introduce the food stamp scheme as part of their efforts to minimise the social cost of structural adjustment, and their implications. The paper is structured as follows. Section 1 discusses the idea of food stamps as it evolved and its rationale. Section 2 deals with the US experience and the experiments of Sri Lanka, Jamaica and Zambia. The final section concludes the article.

I
Food Stamps

The economic access of low-income households to foodgrains and therefore their nutritional intake can be improved either by direct or indirect income transfers. Regarding indirect income transfer, the PDS, under which essential food items are provided at subsidised prices, is an important means provided it is carried out efficiently. As for direct income transfer, food coupon is an important mechanism, which provides tied income transfers. Food coupons are issued to households having incomes below a specified level that can be used to buy specified food items at authorised shops at non-subsidised prices. The major advantages claimed for the food stamp programme are that they ensure higher food-consumption of food-based income without entailing the administrative burden and costs associated with a system of general price subsidies. Food stamps transfer income as food puchasing power rather than cash *per se* to vulnerable households. Marginal propensity to consume food from transfer in kind is supposed to be higher than that from cash transfer if the incomes embodied in the stamps are not infra-marginal.[1] This is because if the amount of income transfer is infra-marginal, that is, less than what the household would normally spend on the commodity specified, the stamps will be used for getting the commodity but the money implicitly saved will be spent on the entire consumption basket. That the food stamp incomes are infra-marginal and lead to larger consumption of the identified commodity is ensured by making the usual household expenditure on the food items concerned as a requirement for food stamps with a larger cash value. One such scheme is that under which food stamps are sold to beneficiary households at prices less than their face value. The stamps may be used as money for purchasing food at approved retail outlets. The difference between the cost of getting food stamps and the face value of the stamps is called 'bonus stamps'.

Such a strategy is based largely on the Southworth hypothesis which states that food stamp impact operates only through the income effect for inframarginal recipients [Southworth 1945]. However, there are studies that provide evidence against the Southworth hypothesis. They show that even for individuals, for whom food stamps are infra-marginal, the marginal propensity to consume food from food stamp income is higher than that from any ordinary cash income [Davis and Senauer 1986; Senauer and Young 1986]. In the US, food stamps were issued with purchase requirement till January 1979. In developing countries like Jamaica, Sri Lanka and Zambia there is no such purchase requirements. The disadvantage of the scheme is that these stamps cannot guard the consumers against short-term price fluctuations even if the stamps are inflation-indexed [Pinstrup-Andersen 1988]. The programme with the purchase requirement will result in the exclusion of those households who do not have enough resources to buy the minimum amount. Food stamps based on the means test are not targeted prefectly even in the US, let alone developing coutries where income records are non-existent. Further, the imposition of purchase requirements, if any, deters particularly the neediest like old and disabled persons.

II
Food Stamps in the US

The food stamp programme in the US began in 1939 as an alternative to the food distribution programmes. The food distribution programmes were started during

the depression of the 1930s but had to be abandoned due to consumer dissatisfaction. The food stamp programme as it originated had the twin objective of improving nutrition and supplementing farm income. Accordingly the programme was handled by the US department of agriculture and not the department of health and human services. Consumers, on purchase of food stamps that could be exchanged for any food item, were given bonus food stamps that could be used to procure commodities declared to be in surplus. For example, under the programme blue-coloured stamps were issued to poor families at the rate of two dollars per person per month. Of course, the issue of blue-coloured stamps was conditional on the family purchasing four dollar's worth of orange-coloured stamps per person per month. Orange stamps could be used to exchange for any good while the free blue stamps only for buying goods declared to be in surplus from time to time. Food stamp programme in this form continued till 1943, that is, till food surplus existed.

In 1964 the Food Stamp Act was passed solely with the objective of improving nutrition and not ensuring market for surplus food items. The act provided for some flexibility and the states had the option either to continue with the then existing food distribution schemes or replace it by food stamps setting their own eligibility standards. With the increased concern for nutrition, stamp allotment was increased in 1970. The programme was made much more flexible in 1971 by introducing the variable purchase option under which households were not required to buy and utilise their entitlement at one transaction. In 1973 the programme was extended to all the counties, replacing the food distribution programmes which were limited to schools. Consumer participation in the programme increased particularly after 1977 with the elimination of purchase requirement. In 1979 an additional three million got enlisted in the programme [Fersh 1981]. These people consisted largely of the elderly and the rural poor. In 1979 food stamp benefits were restricted to only those households whose net income after standard deduction was less than the federal poverty line and whose annual financial resources did not exceed $ 1,750 (or $ 3,000 for the elderly). Households were allotted food stamps worth the cost of a diet meeting some normative nutrient norms less 30 per cent of the household income as declared to be eligible for food stamps. In 1980 the food stamps were modified into a pure income transfer scheme under which old age and disabled persons were paid in cash.

How successful and what was the impact of the food stamp programme in the US? The assessments and the conclusions of most of the studies on US food stamps in different counties are consistent. Viewed as an income transfer scheme, the federal allocation for food stamps across countries were correlated with their needs, defined in terms of poverty and mortality rate [Boehm et al 1980]. MacDonald (1977) provides evidence for poverty reducing effects of food stamps. The shortcoming of the programme was that it discriminated against the working poor owing to time lost in certification and recertification for stamps and in buying food stamps. Therefore, only about 27 per cent of such non-welfare households participated in the programme [McDonald 1977]. The participation rate increased substantially with the elimination of the purchase requirement in 1977.

As regards the nutritional impact of the food stamp programme, evidence is not conclusive. While Abdel Ghany, based on a consumption survey, found positive correlation between income and adequacy of niacin, vitamin A, vitamin C, protein and iron [MacDonald 1977], Madden and Yoldor (1977) found no income effect on dietary adequacy in Pennsylvania. Studies based on smaller surveys on food stamp impacts found evidence of beneficial effects on nutrition, for instance, Reese and Adelson (1962) using studies on pilot programme in urban Detroit and rural Fayette county, Pennsylvania. Logan and de Loach (1973) found that nutritional intakes had more to do with education and age than with income or food stamps. West (1978), Basiotis et al (1983), Allen and Gadse (1983) found evidence of positive nutritional effects of the food stamp programme. West and Price (1976) found food expenditures to have increased with participation in the programme. Allen and Newton (1986) consider food programmes, particularly the Food Stamp programme to be largely responsible for the disappearance of widespread hunger.

Thus, on the whole, the US experience suggests that the food stamps have been effective in achieving some degree of income redistribution and improving nutritional status. As the US experience prior to the elimination of purchase requirement suggests, food stamps with purchase requirements may not succeed in ensuring economic access of foodgrains to all since it assumes willingness and ability to participate in the programme. Even in the US, whose experience with the food stamps is one of the most successful, the programme does not seem to have covered a large proportion of eligible households [Davis and Senauer 1986; Coe 1983]. One major reason for this was that the participants could be easily identified in food stores as 'welfare recipients' and experienced loss of self-esteem that acted as a major deterrent to participation in the programme [Coe 1983]. Stuart (1975) found that 42 per cent of the food stamp beneficiaries felt ashamed to admit being welfare recipients.

Food Stamps in Sri Lanka

The Sri Lankan government undertook an economic reform package to reduce government intervention in the economy and permit market to have a major say in price determination and resource allocation in November 1977. As part of these policy measures, Sri Lanka replaced its general price subsidy scheme by the new targeted food stamp scheme in September 1979. The general price subsidy scheme was abolished mainly to reduce government expenditures and generate savings for investment. But, the poor had to be protected against the adverse effects of removal of general price subsidies. To achieve this objective at minimum fiscal cost, Sri Lanka opted for a system of food stamps.

Sri Lanka is a poor developing country that was a British colony during a considerable part of the 19th and 20th century. It is a low-income country with a per capita GNP of $ 500 in 1991 [The World Bank 1993]. It is a predominantly agrarian economy with about 50 per cent of the labour force depending upon agriculture and about a quarter of GDP originating in agriculture. Agriculture consists of two distinct sub-sectors: (i) the plantation sector and (ii) the peasant sector. The plantation sector is the dominant sector, and tea, coffee and rubber are its three major crops which are largely exported. Tea alone accounts for about 50 per cent, and tea with coconut and rubber account for about 90 per cent of the foreign exchange earnings. Sri Lanka has been dependent largely upon imports for food, clothing and other commodities. Her average per capita GNP was $ 179 during 1970-75. Still the averge quality of life, measured in terms of variables like infant mortality, life expectancy and adult literacy, in Sri Lanka has been very high thanks to the extensive support-led security measures of the government [Sen 1981]. However, these achievements on the social front were not accompanied by a similar performance on the economic front. The cost of social progress, reflected in burgeoning government expenditure along with inflation and growing population, was limited savings and investment. As a result, ever since the 1950s Sri Lanka faced chronic balance of payments' crises in response to which the government resorted to heavy regulation of foreign trade and domestic investments which only resulted in economic stagnation and unemployment. Finally, the government of Sri Lanka introduced

adjustment policies to transform the inward-looking, closed economy to an outward-looking, market-oriented economy. Among the various reform measures, food price subsidy programme was one which received considerable attention in view of its macro-economic and social implications and consequences.

The Sri Lankan general subsidised food distribution system started in 1942 mainly to protect the consumers from rising prices and ensure equitable distribution of basic food items. The system provided the staple food item, rice, and other commodities like wheat flour, sugar and powdered milk. It conferred universal eligibility and there was considerable participation by all, particularly the population from the organised sector.[2] For instance, under the rice rationing scheme about 95 per cent of the population received free weekly rations of rice and some additional quantities at subsidised prices [Gavan and Chandrasekera 1979]. In 1951-52, food subsidy accounted for 5.3 per cent of GNP. Food subsides resulted in improved distribution of food consumption and the calories consumed by the bottom 10 per cent of the population (2,013 calories per capita) was not far different from those by the top 10 per cent (2,486 calories per capita) [Bhalla 1988]. The food policy proved costly on the balance of payments front because Sri Lanka was relying on imports for about 50 per cent of its domestic requirements. Moreover, on the domestic front, Sri Lanka too had pursued an agricultural growth strategy, similar to that of India, of providing state guaranteed producer prices and subsidised inputs of production. In the 1970s, with devaluation and the consequent increase in the cost of imported food items, food subsidies increased reaching in some years as much as 17 per cent of government expenditures and 6 per cent of GNP [Sahn 1987; Edirisinghe 1987]. For instance, the total government subsidy on rice alone increased from Rs 943 million to Rs 1,066 million although the actual quantum of rice distributed under the scheme had decreased from 6,76,564 metric tons to 4,31,783 metric tons between 1977 and 1978. This was mainly due to the increase in the imported price of rice from Rs 1,742 to Rs 3,750 per metric ton due to currency devaluation in 1977.

The abolition of general food subsidies was done in three phases to minimise adverse public reaction. In the first phase, targeting of the subsidised food distribution was done by a means test in February 1978. The distribution of subsidised rice was restricted to those families with a monthly income of less than Rs 300. The income ceiling varied with household size: the income ceiling increased by Rs 60 for each additional member for households with more than five members, subject to a maximum of Rs 750 per month. The means test was conducted based on self-reported income. By targeting, the programme was restricted to only half of the total population. In the second phase, the food stamp scheme was introduced in September 1979 by which households were allotted non-indexed food stamps based on self-reported income and household size. Between a direct cash transfer and a food stamp scheme, the Sri Lankan government opted for the latter on the belief that it would increase the resources at the disposal of housewives for food acquisition [Edirisinghe 1987]. Under this scheme, households with an annual income of less than Rs 3,600 were issued food stamps which varied with household size. For example, households were issued food stamps at the rate of Rs 25 per child under 8 years, Rs 20 per child between 8 and 12 and Rs 15 per member older than 12. The food stamps could be used to buy food items like rice, wheat flour, bread, sugar, dried fish, milk food and pulses at unsubsidised prices from co-operative societies or authorised distributors. Thus, it can be seen that children got food stamps with the highest value and the food stamps could also be used to buy infant milk foods. These provisions were made to ensure that the food stamp benefits to the children would be maximum. Households which were entitled to food stamps were also issued kerosene stamps worth Rs 9.50 per month. These kerosene stamps could be used to buy food items and not vice versa. There was regular revision of food stamp rolls every three months. Food stamps, unused if any, could be deposited in post office savings bank. Without any purchase requirement, and the value being much less than pre-stamp food expenditures, the Sri Lankan food stamps served effectively as an income transfer. The second phase did not involve any reduction in the targeted population size; instead it increased with every new issue of food stamps. Although the food stamp scheme was supposed to be targeted and restricted to only half of the total households in the country, there were considerable leakages because of widespread under-declaration of income [Cornia and Stewart 1987.122]. The lowest quintile that formed the targeted group according to the income criterion received only 38 per cent of the total outlay on food stamps [Edirisinghe 1988b]. In the third phase, food price subsidies were eliminated completely. By the end of 1982, there were no food price subsidies. Prices of food items and goods and services in general were allowed to reflect their costs. Incentives for food production were as increased guaranteed floor prices for rice and liberalisation of trade and transport facilities.

These reform efforts achieved at least in the short run some of the macro-economic objectives. The Sri Lankan government succeeded in securing substantial budgetary savings. Government expenditure on food subsidies as a per cent of recurrent expenditures decreased from 16 per cent in 1977 to 5 per cent in 1982 [Sahn 1987]. The reduction in government expenditure was achieved initially by retargeting to only one-half of the population but largely from the post-reform erosion of real expenditure on food stamps. This was because the annual budget allotted a fixed, in nominal terms, of Rs 180 crore towards food and kerosene stamps [Anand and Kanbur 1991]. The average growth rate of GDP was less than 3 per cent during the peripd 1970 to 1977. The growth rate of GDP increased to 8.2 per cent in 1978, 6.3 per cent in 1979 and 5.8 per cent in 1980 and 1981. Similarly, the average growth rates of agricultural GDP and paddy production, which were 1.8 per cent and 1.4 per cent respectively during 1970-77, increased to 4.36 per cent and 7.9 per cent per annum during 1976-78 to 1980-82 [Thorbecke and Svejnar 1984].

How far the programme has been successful in terms of its social welfare consequences? Lack of 'coherent and effective effort' to protect the vulnerable groups resulted in a deterioration in their human conditions [Cornia and Stewart 1987:125]. There are evidences which show that income distribution in 1981-82 was more skewed than in 1978-79 [Central Bank of Ceylon 1984]. Estimates of four important measures of relative inequality, viz. the Theil's measure, Theil's alternative measure, variance of logarithms and Gini coefficient based on the income and consumer expenditure data from the socio-economic survey of 1969-70, consumer finance survey of 1978-79, socio-economic survey of 1980-81 and the consumer finance survey of 1981-82 are available [Sahn 1987]. The estimates of inequality measures show a steady increase in income inequality from one survey period to the next. Expenditure inequality increased between 1969-70 and 1978-79; as between 1978-79 and 1981-82 Theil's measures and Gini coefficient estimates show a reduction in inequality. Studies have shown that the subsidised food distribution was relatively more successful in generating a more equitable income distribution than the food stamps [Edirisinghe 1987].

These inferences have been drawn on the basis of relative inequality measures and do not tell anything about the absolute levels of expenditures or absolute level of living. Sahn (1987) has shown that a comparative analysis of consumer expenditure data is beset with deflator problems. Sahn found

that bulk of the population, particularly the upper six decile groups, either maintained or improved their calorie consumption levels; but the levels of calorie consumption of three poorest decile groups, which were already abysmally low, declined between 1978-79 and 1981-82. The proportion of ultra-poor households, defined as those households consuming less than 80 per cent of recommended calorie intake even after allocating more than 80 per cent of the consumption budget for food, in the lowest expenditure quintile increased from 9.5 per cent in 1978-79 to 25 per cent in 1981-82 [Edirisinghe 1988a]. This was partly due to rising food prices and partly due to skewed distribution of benefits of growth. As regards the former, prices of food items increased by 94 per cent, non-food items by 91 per cent and food and non-food combined by 92 per cent for the general population during 1978-79 and 1981-82. For the poorest quintile, the corresponding price increases were 89 per cent, 148 per cent and 105 per cent respectively [Edirisinghe 1988a], which implies that the real value of food stamps received by the poorer households declined by more than 50 per cent. The impressive agricultural growth did not percolate down to the poor. This is reflected in the fact that the proportion of ultra-poor in the lowest expenditure quintile of agricultural workers increased from 23.8 per cent to 36.7 per cent between 1978-79 and 1981-82 [Edirisinghe 1988a]. Evidence [Sahn 1987] based on age-specific anthropometric data for the years 1975-76 and 1980-82, show that chronic undernutrition decreased and acute malnutrition increased between 1975-76 and 1981-82. Sahn explains the observed decrease in chronic undernutrition in terms of improved food security between 1972-74 and 1976-79 and the increase in acute malnutrition in terms of increased food insecurity during 1980-82. Anand and Harris (1985) also found food poverty to have increased which provided the basis for Anand and Kanbur (1991) to conclude that the burden of cuts in food subsidy was likely to have fallen disproportionately on the poor.

In fact it was to mitigate the adverse effects of inflation that the government modified the food stamp by enacting the Poor Relief Act No 32 of 1985. The act provided for a change in the agency responsible for carrying out the scheme from the food department to the department of social services. The act increased the income ceiling for food stamp eligibility from Rs 300 per month to Rs 700 per month. Further, the modified scheme provided for graded assistance by income slabs. For households with a monthly income of less than Rs 200, five members were entitled to food stamps. The number of household members eligible for stamps decreased with income slabs; households in income classes of Rs 200-399, Rs 400-599 and Rs 600-700 could claim stamps for four, three and two members respectively [Edirisinghe 1988b]. The act also provided for the food stamp amounts to vary with age-category of the beneficiary. In order to improve the targeting of the programme, the government improved the administrative procedures. To begin with, households had to put up an application to the poor relief committee stating household size, occupation and total income. The committee consisting of four officials and one nominated member would scrutinise the application to confirm eligibility. Once confirmed, the household would be provided with a second application form to furnish further details which would be checked by a government official of the poor relief committee by visiting the household. Once selected the names of household head would be displayed in prominent places so that the public could bring to the notice of the committee, within two weeks of the notification, inclusion of ineligible persons and exclusion of the eligible. The act also provided for legal action against those who claimed food stamps by false declarations. The act was implemented after a thorough nationwide survey in September 1985. Under the modified scheme, the number of beneficiaries increased from 6.8 million to 7.2 million. The total outlay on food stamps reached Rs 1.68 billion and that on kerosene stamps Rs 425 million [Edirisinghe 1988b].

Food Stamps in Jamaica

Provision of effective social services and safety nets at least fiscal cost is a major problem faced by countries experiencing stagnant or declining incomes and increasing government budget deficits. One possible solution in such cases would be to formulate policies, which utilise available limited resources efficiently and deliver benefits equitably and effectively. Jamaican food stamp scheme is one such experiment that has proved relatively successful in terms of targeting.

Jamaica is classified as a lower-middle income country with a per capita GNP of $ 1,380 in 1991 [World Bank 1993]. The Jamaican economic growth after the post world war till 1972 was about 4 per cent per capita per annum.[3] This period of export-led boom based on foreign investment in the bauxite/alumina industry and tourism was a period of hardship and poverty for the vast majority. The degree of inequality in income distribution increased during the period 1958 to 1972 [Boyd 1988]. The oil price shocks of the early 1970s and a fall in the export prices of bauxite resulted in a deterioration in terms of trade. Real per capita GDP declined every year during 1973-1980[4] and the GDP (at 1974 prices) in 1980 was only 77.5 per cent of that in 1972 [Boyd 1988]. During this period the income of labour declined, which was more pronounced during the second half of the 1970s. As a result, the hardships of the poor increased. The Jamaican government tried to minimise the adverse consequenes of declining GDP by increased public expenditure on social services and employment expansion in the public sector. During the early 1970s, the government tried to protect the households through increases in money and real wages. The government did not rely on subsidies as an institutionalised social security measure. Government expenditure as a proportion of GDP increased from 25 per cent in 1972 to 46 per cent in 1976; fiscal deficit increased from 5 per cent of GDP to 24 per cent during the same period [Boyd 1988]. In 1977 the government reversed its wage policy whereby it permitted decline in real wages. It was only during this latter part of the 1970s that subsidies came to be relied upon as a protectionist instrument in the face of declining real wages. The share of subsidies in national disposable income increased from 2 per cent in 1976 to 6 per cent in 1977. Fiscal deficit as a proportion of GDP was 18 per cent in 1980 [World Bank 1988]. The Jamaican government had to set out on a reform programme to reduce the role of the public sector and promote private sector economic activity with an export-oriented approach. The Jamaican government headed by Edward Seaga concluded a stand-by agreement with the International Monetary Fund (IMF) in 1981 and a strongly deflationary agreement, providing for a large devaluation and restrictions on government expenditure and credit, in 1984. As part of the stabilisation programme, the government implemented strict fiscal austerity programmes, including cuts in public employment programmes, labour costs and social services. Minimum wages declined by 11.8 per cent from September 1983 to July 1985 [Boyd 1988]. Current expenditure on social services declined by 40 per cent between 1983 and 1986, on health and education by 32 per cent. Water and electricity rates were hiked considerably. By 1984 the Jamaican dollar was devalued to about a third of its 1980 level. This led to increased prices of many staple commodities. Between October 1984 and March 1986 there was a general price increase of about 44.9 per cent. In 1984, unemployment was very high at 26 per cent for the whole population with over 50 per cent among the 14-24 age group and over 66 per cent among women of this age [Cornia and Stewart 1987:114].

To ensure that the social cost of the stabilisation programmes was minimum, the Jamaican government replaced general food subsidies by a new targeted food stamp and expanded school feeding programme in 1984. Under a crash programme, from a population of 22 lakhs, about 2.75 lakh prospective food stamp beneficiaries were identified and registered for food stamp benefits. Food stamps were distributed to 1.42 lakh beneficiaries within seven months of the programme's announcement. Under the school feeding programme, nutribuns — a fortified bread product — along with a half pint of flavoured milk were distributed to all children in schools located in poor areas. Payment for school lunch was not mandatory; only about 10 per cent of the students contributed which met about 10 per cent of the cost of operation of the scheme. The scale of operation of the programme enlarged substantially and by 1987 nutribuns and half pints of milk were distributed to about 1.7 lakh students (about a quarter of the enrolled children) supplying 800 kcal and 27 g of protein [Grosh 1992:24]. Schools located in remote areas, which could not be easily reached by the daily distribution network, had to continue with the traditional school lunch programmes. Children suffering from moderate and severe malnourishment were provided with cornmeal for porridge. General food subsidies were reinstated during 1986 to 1988 by providing largely subsidised skimmed milk, corn meal and wheat flour. Under welfare programmes 48,000 impoverished, elderly or disabled persons were provided stipends. Social security covered 80 per cent of the labour force.

The Jamaican food stamp system as it exists today evolved in two phases: the first phase covering the period 1984 to 1989 and the second phase covering the years after 1989 when the food stamp scheme was reconstituted. The food stamp scheme, when it started in 1984, provided for two main categories of people likely to be at nutritional risk: (i) all pregnant and lactating women and children under five years of age; and (ii) the poor, elderly and disable, that is, all recipients of poor relief and public assistance (PRPA), and indigent households with an income less than J$ 2,600 per year. Eligibility was decided on an individual basis. Therefore, each household could have more than one recipient. For instance, a poor household could qualify both by the means test and because it had a pregnant woman and a child under five and therefore was eligible for three allocations of food stamps. It was a bimonthly programme and was budgeted to help two lakh individuals in each category. The allotted food stamps were J$ 20 per two months in 1984. It increased to J$ 30 per two months in July 1988, to J$ 40 per two months in July 1989 and finally to J$ 60 in January 1990.

The food stamps programme administration was done by the ministry of labour, welfare and sports, along with the ministries of finance, local government health, the planning institute of Jamaica, and the Jamaican commodity trading company. The ministry of labour, welfare and sports dealt with the general administration, means testing, registration of participants, the distribution of stamps, etc. The ministry of health was involved to the extent its facilities were used for registration and distribution of stamps to beneficiaries in the first category consisting of the most vulnerable groups, viz, pregnant women and children under five. Children under five, *ipso facto*, were eligible for food stamps and were registered in primary health centres by the food stamp officer of the ministry of labour, welfare and sports with their birth certificate as a proof of age. Similar was the case with pregnant women who were kept on the rolls until their expected delivery dates when they had to re-register as lactating mothers and were eligible for food stamps for another six months. The PRPA officers and employees of the ministry of local government assisted in the enrolment of beneficiaries. The ministry of finance and the Planning Institute of Jamaica ensured that the programme dovetailed within the overall government strategy and budget. The Jamaican commodity trading company ensured fund availability to some extent by monetising the food donations.

Self-targeting was ensured by the particular features of the Jamaican health care system. Ninety-five per cent of the Jamaicans live within 10 miles of a government health clinic which have universal access. And richer sections do not use these government clinics. All beneficiaries of the PRPA were entitled to food stamps. The PRPA officers and community members nominated other candidates from the elderly, handicapped and indigent category. Such nominations were verified by PRPA officers by personal visits, interviews and observations, and finally reviewed by parish committees.

The means test was based only on self-reported income. No further cross-verification, except visual inspection of quality of housing and consumer goods during home-visit, was done. The major shortcoming of the system as it evolved was that there was no periodic re-registration with the result that an individual once declared poor always remained poor and entitled to food stamps. For instance, in Jamaica food stamp roll revision took place only twice, once in September-December 1987 when about one lakh food stamp beneficiaries were found ineligible and the second time was during the food stamp reconstitution in 1989.

Food stamps were issued to the beneficiaries in person on a pre-specified day, once in every two months. Pregnant, lactating women and the mothers of children under five were issued food stamps at the clinic where their registration took place. Others belonging to the set of elderly, handicapped or indigent got their stamps at the poor relief office or civic sites like post office, town hall, police station, church, etc.

Food stamps could be exchanged against cornmeal, rice and powdered skimmed milk. They were legal tenders as far as the traders were concerned. The retailers could use the food stamps as money towards payments for purchases of any commodity from wholesalers who in turn got them encashed at commercial banks which finally reached the ministry of labour, welfare and sports through the central bank.

The Jamaican government commitment to the people is reflected in the fact that full publicity was given to the programme through radio, television and newspapers. The officers concerned with the programme were trained about all aspects of the programme, who in turn educated the shopkeepers.

By 1987 the entire programme records were computerised and food stamps were distributed by mail. This has the advantage of reducing the time and transport cost to the participants and therefore increasing the value of food stamps. Distribution of food stamps in mail has another advantage that it reduces any social stigma associated with them and therefore encourage more participation by the poor.

After abolishing general food subsidies in 1989, the government commissioned a diagnostic study of poverty and the food stamps programme and reconstituted the food stamp programme into two parts. The first part is based on individual eligibility and the selection mechanism is similar to the earlier procedure described above. Children under five, pregnant and lactating women and elderly poor are eligible. The elderly received J$ 60 every two months and children, J$ 40 every two months. The second part is called the family plan and consisted of two benefit and eligibility levels for households of different sizes. Single member households earning up to J$ 3,000 per annum are entitled to J$ 60 every two months and larger families earning up to J$ 7,200 per annum, J$ 120 every two months.

An evaluation of the programme in terms of its nutritional impact is handicapped by the fact that no such study is available. The only available but dated study [Miller and Stone 1987] shows that consumption shares of food stamp items in 1986 were not higher

than they were before the programme. Available evidence shows a decline in nutritional status of children under five between 1978 and 1985 [Boyd 1988:143; Cornia and Stewart 1987:115] and improvement between 1985 and 1989 [Grosh 1992:31]. As for targeting, the food stamps were much better targeted than the earlier general food subsidies. While 57 per cent of the food stamp benefits accrued to the poorest 40 per cent of the population, only 34 per cent of the general subsidies were available to the same population group. The leakages were also much less as reflected in the fact that only 8 per cent of the food stamp benefits accrued to the wealthiest quintile whereas under the general food subsidies 26 per cent of the benefits accrued to the wealthiest quintile. One important reason the food stamp programme got targeted relatively better in Jamaica was because the public health care system played a major role in its implementation. In 1988 about 72 per cent of the households with pregnant or nursing women in the poorest quintile received food stamps while it was only 4 per cent with respect to the richest quintile. As regards children under five, 61 per cent of the households with such children in the poorest quintile were food stamp beneficiaries but only 11 per cent of such households from the richest quintile [Grosh 1992:32]. In consequence, about 50 per cent of the households in the poorest quintile and only 6 per cent of the households from the richest quintile received food stamp benefits.

Food Stamps in Zambia

Like Sri Lanka, Zambia too resorted to the structural adjustment programme to remedy the two major macro-economic imbalances, viz, the balance of payments deficit and the government budget deficit. Efforts to reduce the budget deficit had implications for food policy since a significant part of the government expenditure used to be on food subsidies. The major policy concern in this respect was to ensure food security for the vulnerable sections in the urban sector with least budgetary cost to the government. How exactly did the Zambian government go about achieving this goal and how far did it succeed are briefly examined down below.

Zambian economy is dominated by the mining sector, mainly copper. At the time of independence, more than one-third of the population was urban, inhabiting mainly copperbelt towns. Accordingly, the Zambian development strategy was urban-oriented. To finance the development efforts, the government went in for surplus extraction from mining through nationalisation. After South Africa, Zambia had the highest per capita GDP among the African countries. Per capita GDP of Zambia at constant prices has been declining since 1975 [Economic Research Group 1989]. Accordingly Zambia got reclassified in the world development report of the World Bank from a low-middle income country to a low-income country based on per capita income in 1985 [Seshamani 1990] Zambia had a comfortable balance of payments position in 1974 but a deficit one on current account (30 per cent of GDP) in 1975 due largely to a decline in terms of trade (to 54 per cent) in 1975 [Seshamani 1990]. This in turn was due to external shocks like the oil shock of 1973 and the copper price shock of 1974. With significant reductions in copper prices and output, government revenues from minerals declined and the government budget which was surplus in 1974 became deficit, amounting to 24 per cent of GDP. The government rsponse to the fall in copper prices was that of complete regulation of the economy in terms of foreign exchange and price controls [Kydd 1989]. The government strategy succeeded in protecting aggregate consumption levels but at the cost of investment. With the decline in per capita income and skewed income distribution, there was an increase in poverty levels in Zambia. In 1980 about 82.5 per cent of the rural population, 24.3 per cent of the urban population and 59.5 per cent of the total population were living in poverty [Seshmani 1990].

By 1982 end, the external debt was 3.5 times its 1974 level in dollar terms and balance of payments deficit were financed by debt rescheduling with IMF support. The economic reform programme initiated in December 1982 sought to achieve conventional stabilisation through kwacha depreciation (40 per cent effective), and abolition of domestic price controls and reduced subsidies. Along with sectoral reforms, attempts were made to liberalise simultaneously domestic financial markets and current and capital accounts on the balance of payments. Towards this end, the government introduced a system of auctioning foreign exchange during October 1985 to April 1987. With incomplete sectoral reforms, the government expenditure went out of control largely because of food subsidy and marketing inefficiencies. And finally the government reverted to earlier system of controls. In this context, the evolution of food policy and its implications merits consideration.

Till recently the Zambian food policy was concerned with food self-sufficiency. It was urban biased in the sense that it provided for the supply of cheap staples, mainly maize, only to the urban population which accounted

for more than 50 per cent of the total population. The objectives of food policy were to be achieved by a system of regulated producer and consumer prices facilitated by the parastatals. Private trade in cheap staples, particularly maize, was not much because the maize pricing system provided for marketing margins which were too little for the unsubsidised private trade to compete with the parastatals. The government strategy created disincentives for localised storage and distribution, that is, on-farm storage and localised trade resulting in substantial amount of unnecessary haulage and additional transport costs. The subsidy programme also led to inefficient allocation of resources, excessive production of maize irrespective of comparative advantage considerations and restricted urban-rural population movement which was integral for the strategy for agrarian development.

The agricultural sector had to bear part of the burden of food subsidy because of low producer prices. As a result, there was stagnation in food production and increasing reliance on food imports during the 1970s. It was only by 1980 that the government decided to bear the cost of food subsidy by increasing the real producer prices of maize. Total subsidies to the food and agricultural sector which largely went for subsidising maize consumption accounted for about 18 per cent of government expenditure in 1980 [Pearce 1991:440]. The government attempt to reduce food subsidy in 1986 by introducing some self-targeting by restricting subsidy to inferior roller meal and selling breakfast meal at an economic price did not succeed. This was because under the new system roller meal disappeared from the retail outlets and the prices of breakfast meal soared leaving little scope for the majority of the poor to change their consumption patterns.

Food coupon system was introduced in January 1989. The subsidy element in maize price was gradually removed and price controls were generally relaxed. Non-price indexed food stamps of a given value which could be used to purchase maize-meal were issued only to the urban population. Consumer subsidies were abolished for rural households except those headed by government workers. As regards the urban sector, no attempt was made to target and all households were entitled to limited subsidies. Coupon entitlement varied with household size and local party administration conducted registration and distribution of food stamps. Coupons were issued monthly and could be used for purchases at all state-run retail outlets and registered private shops. The retailers could get their food stamps encashed at any branch of post-office. Food stamp targeting began in July 1989. Those employed in the formal sector received registration cards and coupons through their place of work. The employees of the formal sector had to declare not only their income but also the income of their spouse and only those households with combined income less than K 20,500 were eligible for food stamps [Pearce 1991:441]. Those in the informal sector continued to receive food stamps through local service centres with the restriction that the number of eligible dependents per household should not exceed six.

How far the Zambian food stamp programme has been successful in protecting the poor? In fact there was a loss of subsidy during the shift from the general subsidy scheme to the food stamp programme along with an increase in maize prices [Pearce 1991:443]. The loss was more than 30 per cent particularly for the poorer sections for whom food stamps reall[illegible]ned maize consumption and who could little afford superior cereals like rice and wheat. Even though the value of the food coupon adjusted for inflation rates in the primary retail market appears to have remained the same, it is not when it is adjusted for price increases in local markets and street trades where the poor, due to limited purchasing power, procure their food items.

As regards targeting, there was one major problem. The registration of households for food stamps was carried out only during the first two months after the programme started because of which a significant subset of the vulnerable household could not get enlisted. There were also other problems due to lack of provision for registration of new additions to households, delays in issuing coupons which were not valid after the 26th of the month, lack of outlets in low-cost districts which involved distant travel for procuring meal in exchange for coupons and therefore reduced effective value for coupons, etc. The whole programme was designed in such a way as to minimise government expenditure on food security rather than to ensure food security to the poor. This was because only a limited number of retail outlets were participating in the scheme due to high cost of administration and low incentives which also meant high cost and low incentive for poor households for participating in the programme. The coupons could not be used as cash because they were issued in the name of the household recipient and were not transferable. Further the reliance of the poor households on coupons got restricted as only a limited number of coupons were accepted at retail outlets per transaction.

One objective with respect to which the programme seemed to have really succeeded is reduction in government expenditure. The budgetary cost were reduced to less that third of the earlier general subsidy level. the whole, the poorest in the urban are were worse off and the poor administrati of the food stamp scheme in Zambia o guaranteed perpetual misery for the excluded from the coupon system.

III
Conclusion

The food stamp programme has been of the alternative options suggested considered for India as part of the governm effort to reduce budget deficit with le social cost. Food stamp programme, as important means of providing safety-net the poor, has been carried out in so countries during their structural adjustm programme. The survey of coun experiences with particular reference to Lanka, Jamaica and Zambia presented abo highlight the following features to be no before implementing such a programme India.

As our studies on reform [Suryanaray 1995a,b,c] have shown, physical access foodgrains is a major factor explaining in state variations in food and calorie inta Further as the studies by Venugopal (19 and others have shown an increase entitlement *per se* is likely to gener inflationary pressures on foodgrain pri and therefore undermine the efforts improve food security. Therefore, fo stamps may not improve collective fo security since targeted food stamps incre the purchasing power of those with h income elasticities of demand for food hence would exert upward pressure on o market prices. Food stamps will not ens physical access in the short run. Therefo the option for food stamps will have to restricted to geographical regions accord to need-based and market efficiency crit and therefore primarily to urban areas done in Zambia.

One major problem which every coun faced during food stamp program implementation is that of the means-t for identifying the vulnerable sections food stamp targeting. This is going to a serious problem in India where major of its labour force is employed in unorganised sector, no proper inco records are available with less than one cent of the population paying direct inco tax and more than two-thirds of population is rural with highly seaso incomes. In this context, India cannot up a sophisticated scheme like the one u in the US. Nor can she hope to successfu implement a scheme like those of Sri Lan and Jamaica based on self-reported incor This would mean only available scope

that for discretionary targeting whereby administrators of the scheme decide on the eligibility of a given applicant. This has several limitations like scope for corruption and leaving out deserving cases due to ignorance, low levels of education and remote location. Therefore, India could consider the option of Zambia under which the urban formal sector workers with household per capita incomes below a specified level are asked to register for food stamps through their employers. This option may be combined with the Jamaican strategy of screening by criteria that correlate with need, that is, subsidies for pregnant women, children, etc. In India too there are good chances of self-selection of urban vulnerable groups through the public health care system and municipal schools since the better-off generally avail of the private medical and school facilities. In other words, since the scope for targeting of food stamps based on means-test is limited because of possible leakages due to maladministration, targeting may be based on regular life cycle contingencies like maternity, sickness, disability, age-related and seasonal undernutrition, unemployment and old age.

Once the set of beneficiaries is identified, the beneficiaries may be issued food stamps, as in Jamaica, which can be reclaimed in any private outlet against certain specified basic food items. This is important given the finding that in India with increase in income the consumption patterns of even poorer sections have tended to shift away from basic cereals. This will also reduce considerably the huge fixed cost associated with the maintenance of the FCI.

Another important factor to be noted is with respect to the need for price indexing the stamps. Stamps, if not indexed, have the advantage that the government budgetary cost of food subsidy would decline in course of time as happened in Sri Lanka. But, its very purpose of protecting the poor will be defeated by erosion of benefit values of food stamps.

Notes

[This study is a part of the research project on Issues in Food Targeting and the Role of Food Stamps being carried out for the UNDP Research Project on Strategies and Financing for Human Development.]

1 See DeVaney and Moffitt (1990) for a careful empirical study which shows that the marginal propensity to consume out of food stamp income is much higher than that out of any other income

2 For a brief history of the subsidy scheme in

3 The average annual growth rate was 4.4 pe cent during the 12-year period 1961-72 [Boy 1988].

4 During most of the 1970s bauxite and alumin exports accounted for 60-70 per cent o exports [Cornia and Stewart 1987:114].

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Fertiliser Use Efficiency in Indian Agriculture

Vidya Sagar

Recent studies observe continuing decline in fertiliser response through the 1980s. This they attribute to over-concentration of fertilisers in agriculturally advanced regions. This article, by examining fertiliser responses under field conditions, argues for the contrary. According to it, it is the low fertiliser application combined with low to very low use efficiency in the less developed regions that is primary responsible for the decline.

I
The Efficiency Debate

THE present study is the outcome of the questions arising from the study by Parikh and Mosley (1983). The results of the analysis of the 1971-72 data, drawn from the High Yielding Variety Programme (HYVP) evaluation survey of the IASRI, showed zero value for the marginal physical product of fertiliser in wheat in the three districts of Haryana viz. Rohtak, Ambala and Karnal. These results could be interpreted as showing the peak of the curvilinear fertiliser response surface at around 70 kg/acre of fertiliser (not nutrient) application.[1] This implied that the farmers were on a very low response surface. The results supported the earlier observations by Vaidyanathan (1977) and Vidya Sagar (1978) that the yield response to fertiliser use during the initial phases of the green revolution was lower than even the conservative estimates based on local varieties. The existence of a significant divergence between the response coefficients estimated from the field trials on the one hand and those observed by the farmers under conditions of mass application is widely accepted. Vaidyanathan explained this divergence in terms of quality of irrigation, and deficiencies in trace elements besides failure on the part of the farmers to follow the recommendations regarding timing and mode of fertiliser application. Also, it may be argued that the promotion of the seed-fertiliser technology during its initial phases did not keep in view the synergy between fertiliser irrigation and HYV. The concept of 'nutrient balance' in the soil and field specific fertiliser recommendations had not started picking up. Indeed issues related to substitutability/complementarity between the three critical inputs of the package viz. seed, fertiliser and irrigation were very much in the discussion and it was believed by some that the three may be substitutes [see for example, Parikh 1979; Vaidyanathan 1978]. The unsynchronised growth in areas under HYV and fertiliser consumption during the 1970s may possibly support this (see Sections I and IV). The reason for such a phenomenon may include increases in fertiliser prices during 1974-75 but the fact remains that synergy between the inputs was not the point of emphasis, at least in the state griculture directorates.

The confusion is aggravated by a number of recent studies observing that the fertiliser response has declined sharply during the 1980s. This implies a further worsening of an already bad situation on fertiliser use. Sarma and Gandhi (1990), for example, observe:

> The response coefficient analysis indicated a decline in the response for fertilisers, from a response of the order of 10 in the 1960s and early 1970s to a response of the order of 7 in more recent years. The production function analysis indicates a comparable response at the mean of 8.6. This supports the hypothesis that there has been a decline in the aggregate fertiliser response. Since fertilisers are expected to play a crucial role in the future growth of foodgrain production, this decline in the response is of major policy concern.

Similarly, Sidhu and Byerlee (1992) argue

> productivity per unit of fertiliser applied has tended to decline as the marginal returns to additional fertiliser use have fallen [see also Grewal and Rangi 1983].

CIMMYT (1989) report on wheat finds,

> From 1966 to 1973, when fertiliser use rose rapidly, the gross grain nutrient ratio [uncorrected for other factors] was about 10:1. From 1973 to 1986, the gross grain nutrient ratio fell to 5:1 in the Pakistani Punjab and 7.5:1 in the Indian Punjab. Data suggest that recently the ratio has fallen even more, especially in Pakistan. A fall in the grain nutrient ratio is expected given diminishing returns to fertiliser application. Nonetheless, these relatively low ratios at fertiliser levels around 100-150 kg/ha suggest that fertiliser efficiently is often quite low.

Further analysis of the IASRI data was needed but it was not easily accessible except for the annual reports which provided tabular analysis of the data broadly related to the 'agro-economic' enquiry and the crop cutting experiments. Also there was a large gap between the reference period of the survey and the publication of the reports. Further, until the reference year 1973-74, farm practices on the use of fertilisers and its relationship with yield was not analysed even through tabular analysis. The 1974-75 report for the first time cross tabulated fertiliser use by various other variables such as holding size. It also reported average yield by nitrogen/fertiliser application.

Such data could be used to test the results emerging from Parikh's paper. Data corroborating very low fertiliser productivity appeared in the reports year after year. Since such results were in the form of grouped data, it was possible to assume away other disturbances.[2] One expected that the results would show a smooth curve of growing yield rates as fertiliser application increased though at a diminishing rate.

Smooth curves, it indeed produced but in most cases the curves dipped too early. In an extreme case, in 1975-76, the entire curve had a negative slope. The average yield of cotton in Hissar was shown with a gradual decline from 3.1 Qt/ha for the 0-30 kg/ha application to 2 Qt/ha for the 90-120 kg/ha application. Similar is the case with Akola (Maharashtra) wheat and Guntur (Kharif rice) (Table 1). It was quite tempting to analyse data more systematically.

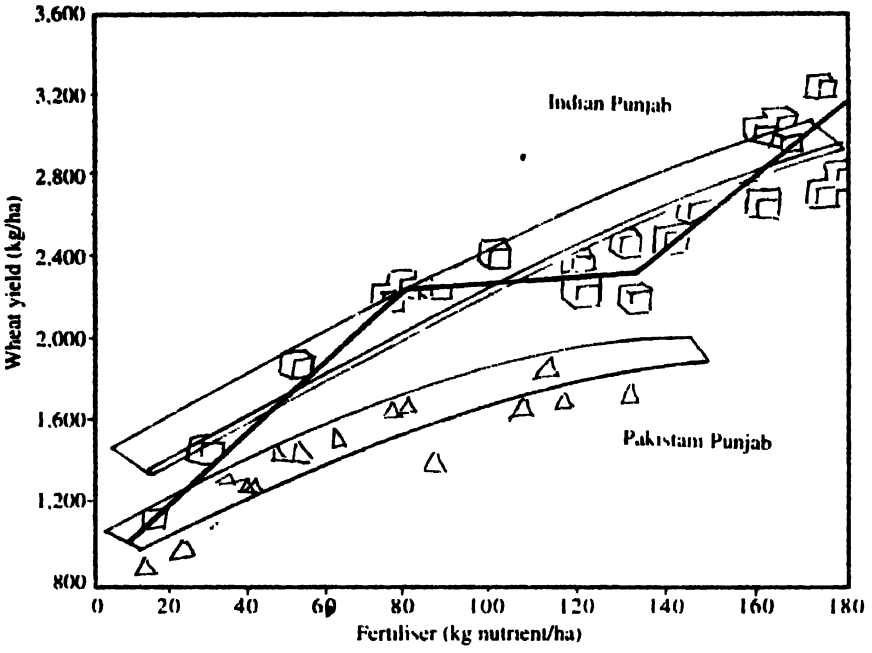
In 1990 ICSSR, agreed to provide funds for the project. The access to the HYVP evaluation survey data was achieved through the good offices of V S Vyas, Prem Narain, and S K Raheja. It was decided to restrict the analysis to some districts in agriculturally superior environments and some from the relatively backward agricultural areas. HYVP evaluation survey districts falling in Punjab, Haryana, Tamil Nadu and Andhra Pradesh, Rajasthan and Bihar were thus included in the study. The availability of data was, however, restricted to the reference years 1974-75, 1976-77, 1978-79 and 1979-80. Data for other years somehow could not be retrieved from IASRI computer tapes. Since by this time the data had become quite dated, others and more recent sources of similar data were

explored. At the state level, similar data were available from the Directorate of Agriculture, Rajasthan on the 'T and V Extension Evaluation Survey' for the late 1970s and early 1980s.

However, a major source of data of significant importance viz. cost of cultivation data still remained untapped mainly for the reason that such a massive data could not be handled with the small grant available for the project. Fortunately, a report on the 'Fertiliser Response Ratios for Field Crops' by Centre for Agricultural and Rural

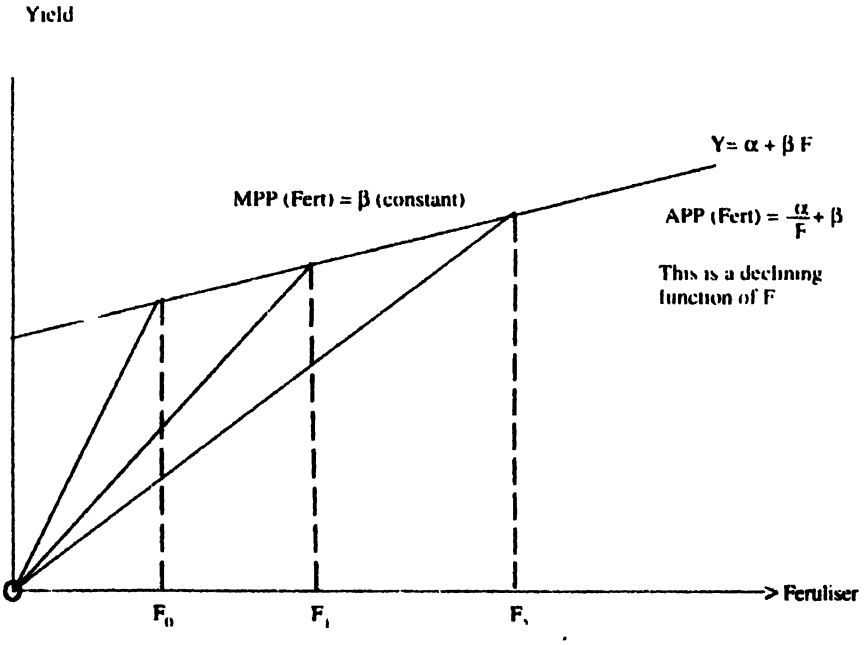
FIGURE 1

1989-90



Note Each point represents one year from 1960 to 1985 No correction is made for changes in other factors

FIGURE 2



Development appeared in 1990. It was mainly based on the analysis of the semi-controlled experiment conducted on farmer's fields but also provided some analysis of the cost of cultivation data for the early 1980s.

A major objective of the present study is to examine fertiliser responses under field conditions as different from the experimental and semi-experimental responses representing efficiency frontier of a production function. An assessment of fertiliser use efficiency is essentially related to the shift in fertiliser responses under field conditions, from below the efficiency frontier to points towards the frontier

Responses derived under the experimental condition are generally too high and indicate the potential that could possibly be achieved under optimal conditions. More realistic responses are derived from the Experiments on Cultivator's Fields (ECF) data of the All India Co-ordinated Agronomic Project (AICARP). Such data were first used by the ISI-FAI study 'Optimum Fertiliser Requirement for the Fourth Plan', popularly known as Parikh Srinivasan study. These responses have been commonly used for the planning exercises. During the earlier phases of mass application yield response to fertiliser used was generally believed to be at around 10 kg of grain to one kg of nutrients. The ECF results show higher response in most cases.

Even the ECF data of the AICARP does not necessarily represent the actual field conditions as the sample plots do have the benefits of expert knowledge on the time and mode of fertiliser application. To the extent farmer's fertiliser practices diverge from the right practices in this regard their fertiliser responses are likely to be lower than the SFT responses. This is evident from various micro level studies conducted individually or institutionally Vidya Sagar, for example, observed the divergence between the response coefficients obtained by farmers under the conditions of mass application and those obtained under the 'Simple Fertiliser Trials', as ECF were then known, on farmers fields Analysing the farm data of five districts of Rajasthan he finds the former response coefficients to be well below those observed under the SFT responses even at a very low level of fertiliser application [Vidya Sagar 1980] Similar findings are obtained for other regions of India (see for example, Das Gupta 1980, Patel 1980, Sandhu et al 1980, Herdt et al 1964 and Panse et al 1964]

Subsequent fertiliser response should have been higher than 10 for three reasons. First,

TABLE 1 AVERAGE YIELD (OF HYV) AND RATES OF FERTILISER APPLICATIONS ACCORDING TO THE RANGE OF NITROGEN APPLICATIONS (1976-77)

Range of N Application (Kg/Ha)	Yield Per Hectare		
	Cotton Hissar	Wheat Akola	Rice (Kharif) Guntur (1977-78)
0-30	3.1	13.0 (41)	12.4 (74)
30-60	2.8	17.9 (90)	15.6 (89)
60-90	2.6	18.8 (132)	13.6 (121)
90-120	2.0	18.1 (148)	13.4 (143)
120-150	-	17.1 (194)	7.1 (162)
150-180	-	12.4 (229)	

Note: Figures in parentheses indicate total nutrient application (N+P$_2$O$_5$+K$_2$O) Only N is applied in the case of Cotton (Hissar)

Source: S K Raheja et al (1981,1984), 'Sample Surveys for Methodological Investigations into High Yielding Varieties Programme', Annual Report 1976-77 and 1977-78.

FIGURE 3

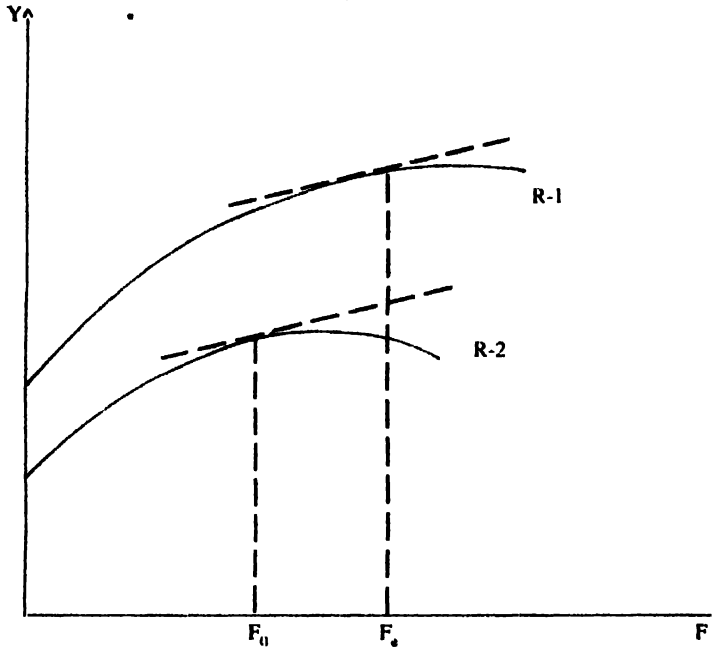
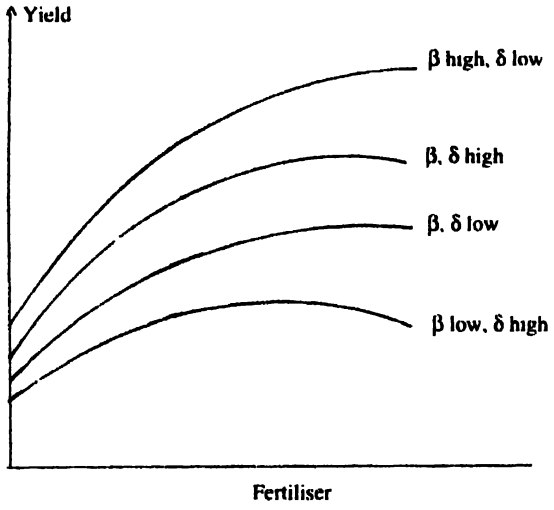


FIGURE 4



a breakthrough in seed technology of the major fertiliser consuming cereals responsive to fertiliser took place after the mid-1960s. Second, awareness of the farmers about the package of practices increased. It is expected that through the process of learning, the farmer in India would try to attain optimum yield rates at the prescribed economic optima if not at the technical optima [Desai 1970]. Third, the major expansion in fertiliser consumption has been in vastly improved production environments in better endowed areas. Jha and Sarin (1984) find that irrigated areas continue to control growth in fertiliser consumption. Even as highly irrigated areas reach their saturation level ongoing irrigation development efforts lead to fertiliser spread to hitherto unirrigated areas. The NCAER's fertiliser demand study (1978) estimates the share of irrigated area in total fertiliser consumption in 1975-77 to exceed 85 per cent.[1] The share of high yielding and improved varieties exceeds 62 per cent during the same period as against negligible during the early 1960s. Thus, expansion of fertiliser consumption on areas of assured irrigation, introduction of HYV and a continuously rising level of technology awareness should have pushed the fertiliser response to a level beyond ten. Vaidyanathan (1977) observes, 'This has not been the case even at lower levels of applications'. In fact at lower level of fertiliser application the responses should be even higher because of the diminishing marginal productivity of fertiliser use. It would have further increased in view of the synergistic effect of the Fertiliser – HYV combination.

However, the realised fertiliser response during the last two decades do not support the hypotheses of so high fertiliser response. Several other studies support this contention [see for example, Ray 1979; Parikh and Mosley 1983; Parikh and Trivedi 1983]. The macro-level estimates of the yield functions, generated from the ECF data and adjusted for actual production, fall by 60 per cent of the ECF estimates when actual field conditions deviate from the semi-controlled condition of ECF (rice) [Narayana and Parikh 1987] or over 30 per cent when the condition are nearly met (wheat).

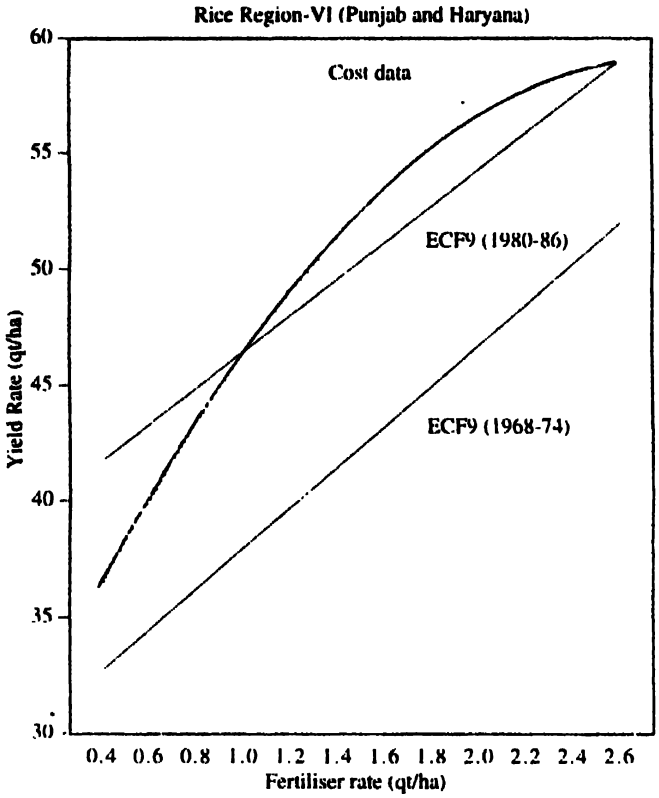
The intensity of application in better endowed areas of Punjab, Haryana and Uttar Pradesh on the one hand and Andhra Pradesh and Tamil Nadu on the other is very high as compared to other areas. It is in this context that some people argue that the level of fertiliser use in such well endowed areas has reached the saturation point. The fall in the use efficiency of fertilisers in India is primarily attributed to over concentration of fertilisers in these areas. Further growth in fertiliser consumption therefore, it is argued, shall have to be on rain-fed areas and in crops other than wheat and paddy.

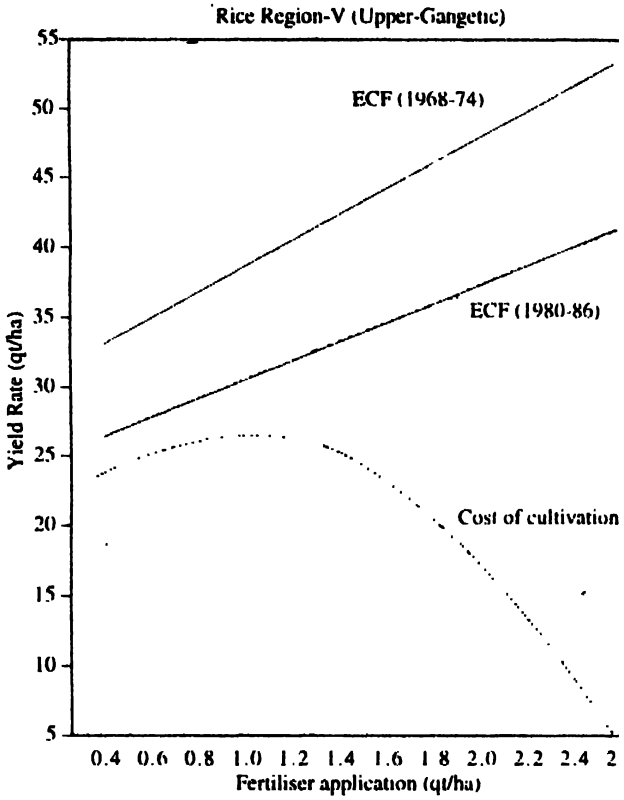
The low level of fertiliser response has important bearing on foodgrain production in yet another way. The low response are affecting the level of fertiliser application thereby hampering further growth in fertiliser consumption. Jha contends that the reason for the level of application not rising over time needs to be examined. Only a detailed analysis of data on fertiliser responsiveness will provide the answer.

The low responses have yet another dimension – that relating to subsidy on fertilisers. The artificial cuts in fertiliser prices might be pushing its application at least in some cases, to levels beyond those dictated by the actual farm conditions. This might be the case in the results reported in the studies by Srivastava (1979), Patel (1982) and Parikh et al (1983a, 1983b). In case the excess doses are being applied by big farmers, by virtue of their sound economic position and the subsidy component, there would certainly be a case for restricting the latter without essentially affecting the level or growth in agricultural production. Diffusion rather than concentration of fertiliser use should then be the policy. This aspect also requires some investigation.

Section II is based on component analysis of the increase in agricultural/foodgrains production along with a technological decomposition [Vidya Sagar 1978, 1980]. Models will also be used to work out the 'a posteriori' response coefficients both at the state level as well as at the all India level. Estimates of fertiliser responses using cross section macro data (district level) are also derived for the intensive fertiliser consuming

FIGURES 5 AND 6: FERTILISER RESPONSE CURVES





states of the wheat and the rice belt. Section III discusses responses derived from micro-level data. These include (i) analysis of ECF responses of the AICARP, (ii) uncontrolled field responses generated from HYVP evaluation surveys during the 1970s and the cost of cultivation surveys during 1980s. Section IV synthesises the analysis to provide an explanation for the change in fertiliser use efficiency in Indian agriculture and the resulting policy implications.

II
Fertiliser Responses in India

MACRO ESTIMATES FOR CEREAL CROPS

In order to investigate the hypothesis of falling fertiliser response, macro-fertiliser responses have been computed in this chapter from the actual production data after adjusting it for change in cropping pattern and increase in the use of other productivity enhancing inputs, e g, irrigation and high yielding varieties.

There are two major problems in the conventional production function approach to derive response coefficients to technical inputs. First, movement in these inputs over time is often synchronised leading to the problem of multi-collinearity and it becomes really difficult to isolate individual responses of the inputs. Secondly, while cropwise and crop-groupwise data on such inputs as irrigation and HYV are available, it is not the case with fertilisers. Except for a few time point estimates, e g, NSS in 1970-71, NCAER[4] in 1975-76, 1976-77, cropwise estimates of fertiliser use are not available. Although one may attempt to estimate trends in fertiliser consumption by crops on the basis of these point estimates it would still not be possible to incorporate year to year fluctuation in fertiliser use decisions on which the response to fertili use depends so critically. An altern methodology based on assumed respo coefficients of irrigation and HYV, deri a posteriori response to fertiliser use – b for individual crops and for all cere [Vidya Sagar 1977, 1978 and 1980; Sarma and Gandhi 1990]. We shall rest our discussion to increase in product attributed to yield increase only.

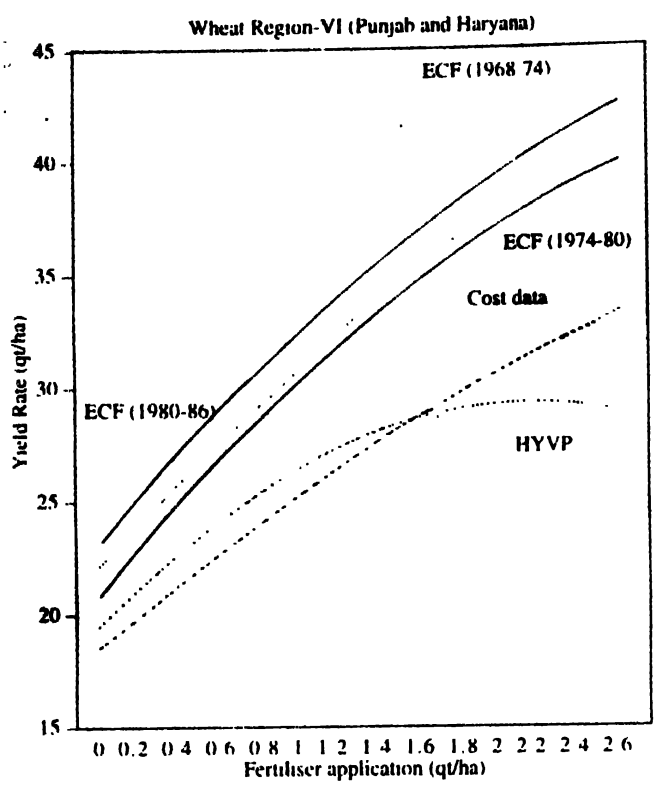
TABLE 2: ALL INDIA RESPONSES: CEREALS

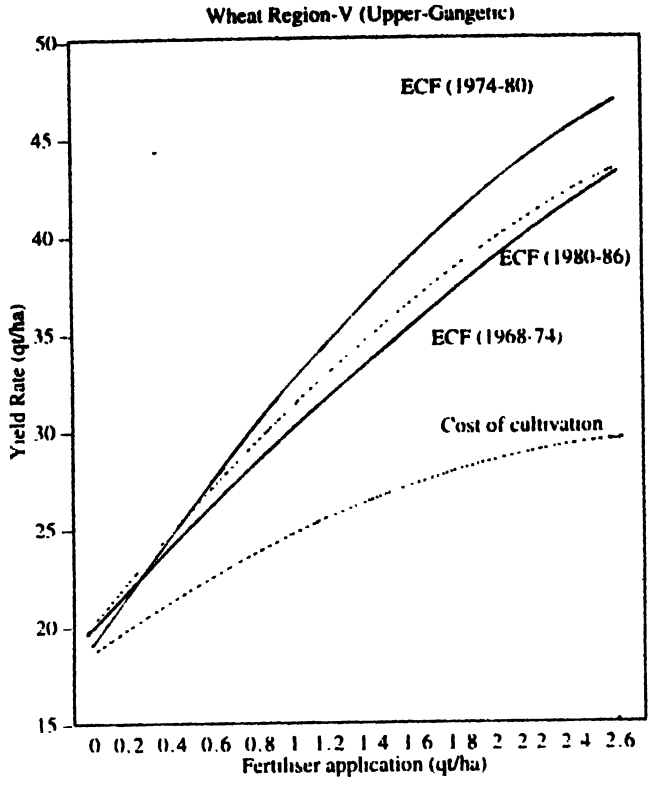
		Derived Fertiliser Response between Periods							
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-
A Adjusted for other inputs									
With Fertiliser	a	-5.55	10.54	-7.53	-0 84	2 04	4 25	5 35	6.6
Distribution of	b		5 46		-5.03		2 87		5 9
Sarma et al	c			4.62	5.28	1.76	3 88	5 23	6.2
With constant	a	-3.94	9.02	-8.53	-1 97	2 07	6 02	6 04	7 1
distribution	b		4 36		-7 02		3.26		6.5
(NCAER)	c			4.20	5.94	1.99	4 70	5 92	7 2
B Composite Response									
With Fertiliser	a	3 60	20 46	1.92	16.21	5.78	8 40	8 03	8.3
Distribution of	b		15.17		7 17		6 76		8 1
Sarma et al.	c			10.38	12.78	6.47	8.01	7.44	8 2
With Constant	a	2.56	17.51	2.17	38.18	5.84	11 89	9.06	9.0
Distribution	b		12.12		9 99		7.68		8.9
	c			9.43	14.39	7 32	9 72	8 42	9.5

Notes: Periods 0: 1961-64 3: 1971-74 6: 1981-83
1: 1964-68 4: 1974-77 7: 1984-87
2: 1968-71 5: 1977-80 8: 1987-90

a: Responses over successive triennia; b. Responses with one triennium gap. c. Responses v two triennia gap.

FIGURES 7 AND 8: FERTILISER RESPONSE CURVES





METHODOLOGY

Total production of cereals (Q^t_{cer}) during period-t defined as

$$Q^t_{cer} = A^t_{cer} \cdot Y^t_{cer}$$

where,

A^t_{cer} is the total area under cereals during period-t.

$Y^t_{cer} = \Sigma\, at_c.y_{tc}$ is the average yield of all cereal crops during period-t.

Change in total production of cereals may be defined as

$$\Delta Q_{cer} = A^t_{cer}\, \Delta Y_{cer} + Y^n_{cer}\, \Delta A_{cer}$$

The change in cereal production attributed to yield change

$$Q_{cer}(Y) = A^t_{cer}\, (\Delta Y_{cer}) \quad [Y_{cer} = \Sigma a^t_c.Y^t_c]$$
$$= A^t_{cer}\, [\Sigma\, a^t_c.(\Delta Y_c) + \Sigma\, Y^n_c.(\Delta a_c)]$$

where Q^t_c, A^t_c and Y^t_c, denote respectively production, area and average yield under crop-c during period-t (t=0,1..8) and $a^t_c = (A^t_c/A^t_{cer})$ is the proportion of total cereal area under crop-c.

The second component on the right hand side may be identified as the cropping pattern component and therefore the pure yield component of growth in the production of cereals,

$$Q_{cer}(Y)] = A^t_{cer}.\Delta y_{cer} - A^t_{cer}.\Sigma y^n_c.\Delta a_c$$
$$A^t_{cer}\, [\Sigma a^t_c.\Delta y_c] = \Sigma A^t_c.\Delta y_c.$$

the yield component of the total production increase in cereals may be attributed to the three technological inputs, viz. HYV, irrigation and fertilisers.[3] Assigning predetermined responses to the shift in area from local varieties to high yielding varieties (β_H) and irrigation (β_I), the derived growth in the pure yield component of cereal production [$\Delta Q_{cer}(Y)$], attributable to irrigation and HYV [see for details Vidya Sagar 1978b], $\beta_I.\Delta I_{cer}(y) + \beta_H.\Delta H_{cer}$. The remaining growth in the yield component of production increase may be attributed to fertiliser and given as

$$[\Sigma A^t_c.\Delta y_c - \beta_I.\Delta I^{(y)}_{cer} - \beta_H.\Delta H_{cer}]$$

The derived fertiliser response would than be

$$[\Sigma A^t_c.\Delta y_c - \beta_I.\Delta I^{(y)}_{cer} - \beta_H.\Delta H_{cer}]/\Delta F_{cer}$$

Where, β_I and β_H are yardsticks of (average response to) irrigation and HYV respectively. $\Delta I^{(y)}_{cer}$ and ΔH_{cer} indicate increase in irrigated area under cereals going for the yield improvement (discussed below) and increase in area under HY and hybrid varieties. ΔF_{cer} shows the increase in fertiliser consumption of the cereal crops.

The reason why HYV is being considered as a separate input and not clubbed with fertiliser and irrigation is that the response surface for HYV is substantially different from the local varieties. Normally each region is sowing from among the recommended varieties. There are inefficiencies related to the choice of appropriate variety fertiliser dosage (including composition) and soil-moisture supply. To the extent, an agricultural system adjusts to reach the potential for a lower level of input use, its efficiency (technical efficiency) improves. It is necessary to subtract from the aggregate

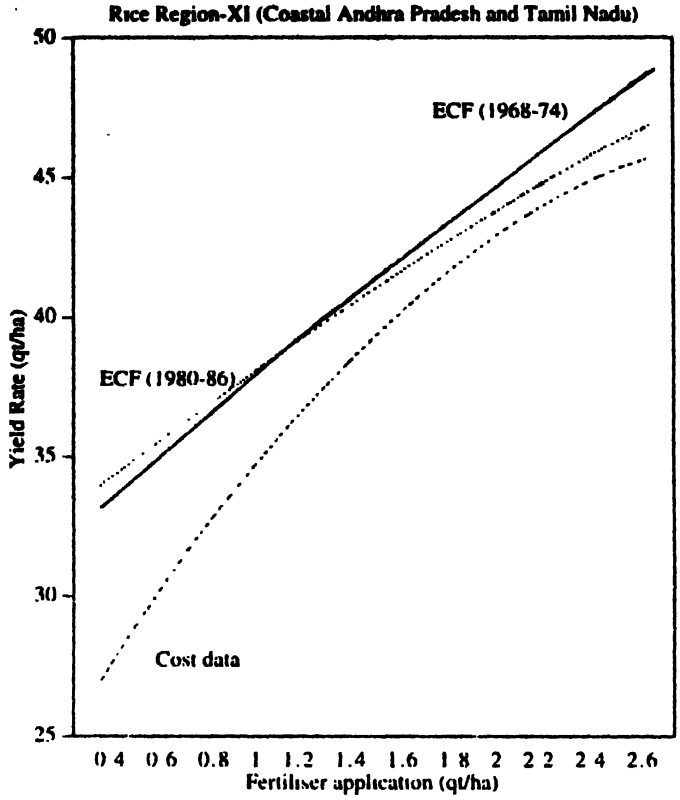
TABLE 3 DERIVED FERTILISER RESPONSES FOR ALL CEREALS IN (PUNJAB AND UP)

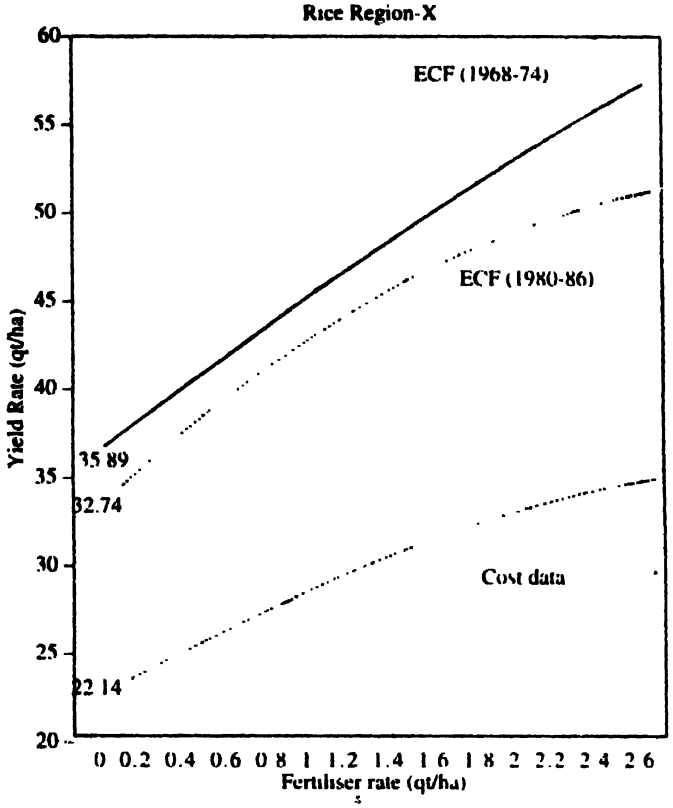
		Derived Fertiliser Response between Periods							
		0–1	1–2	2–3	3–4	4–5	5–6	6–7	7–8
Punjab	a	-14 91	10 17	-0.54	64.05	4.62	2 31	4.78	14.71
	b		2.98		1.23		3.82		7.56
	c			1.92	6.73	4 70	4.64	4.52	5 36
U P	a	7.10	3 84	-9.58	-13.31	2.05	11 65	8 97	6.69
	b		4.23		-13.76		5.16		7.01
	c			1 47	-2.26	-2.02	4.14	6.70	7.81

Notes: Periods 0: 1961-64 3: 1971-74 6: 1981-83
1: 1964-68 4. 1974-77 7: 1984-87
2: 1968-71 5. 1977-80 8: 1987-90

a: Responsive over successive triennia; b: Responses with one triennium gap; c. Respnses two triennia gap.

FIGURES 9 AND 10: FERTILISER RESPONSE CURVES





response the respective effects of both irrigation and HYV. Otherwise, the aggregate response, after the entire area has been brought under HYV and irrigation would show only the fertiliser response while earlier it includes the effect of both irrigation and HYV. Besides, our objective is not to measure the change in fertiliser use efficiency attributable to the technical change (local variety to HYV) but measure the movement from below the efficiency frontier towards it.

There are two points of importance in this methodology. The first relates to irrigation (distribution to various crops). Not all increase in irrigated area may be attributed to the yield component of the production increase. A part of it contributes to the expansion of area under crop. Only the increases in irrigated area over and above the irrigation ratio during the base period would contribute to yield growth. Thus, the yield increasing component of change in irrigation may be given as

$I'_t - I''_t (A'_t/A''_t)$

The other point relates to the distribution of total fertiliser consumption into different crops/crops-combinations at various time points. Unfortunately, cropwise fertiliser consumption data are not available in India. Such estimates are available through the NSS data for 1970-71 and NCAER survey data of 1975-76 and 1976-77 [Government of India 1978].

Sidhu and Sidhu (1991) believes that the share of fertiliser going to foodgrains is constant, since the beginning of the green revolution, at around 75 per cent, at the all India level. According to NSS report (26th round, October 1978) share of cereals in total fertiliser consumption for year 1970-71 is 72.3 per cent. Based on NCAER data, Desai (1982) estimates the share of fertiliser going to foodgrains at around 70 per cent (69.58 per cent during 1975-76 and 69.85 per cent during 1976-77).

Sarma and Gandhi, on the other hand, generate a series at the all India level that increases the foodgrains' share in total fertiliser consumption from 48.67 per cent in 1966-67 to 56 per cent in 1970-71, 70 per cent in 1976-77 and 75 per cent in 1983-84. This follows from Desai who argues that the NSS estimates do not cover plantation crops (tea, coffee and rubber) and also the estimates for certain crops in the remaining non-plantation crop categories is underestimated in NSS Report. Through a

TABLE 4. DERIVED FERTILISER RESPONSES FOR ALL CEREALS IN ANDHRA PRADESH AND TAMIL NADU

		Derived Fertiliser Response between Periods							
		0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8
Andhra Pradesh									
Rice	a	10.01	-0.81	-6.26	-9.78	5.57	13.99	0.92	5.89
	b		3.75		1.93		7.14		2.89
	c			7.64	0.47	1.38	3.76	3.83	5.05
Total cereals	a	7.72	-2.87	20.42	-5.94	6.38	7.95	-2.55	2.80
	b		-0.50		4.26		6.05		0.31
	c			2.06	-0.88	3.04	3.47	1.22	2.31
Tamil Nadu									
Rice	a	0.66	3.13	2.25	-6.60	0.91	-26.85	49.82	8.18
	b		6.19		8.75		-0.60		9.24
	c			7.28	4.76	3.03	1.76	1.64	8.78
Total cereals	a	1.42	-0.45	-2.43	-14.29	2.90	-13.26	2.75	16.55
	b		4.67		0.90		0.57		-1.09
	c			5.15	1.82	4.03	2.40	0.43	5.92

Notes: Periods 0: 1961-64 3: 1971-74 6: 1981-83
1: 1964-68 4: 1974-77 7: 1984-87
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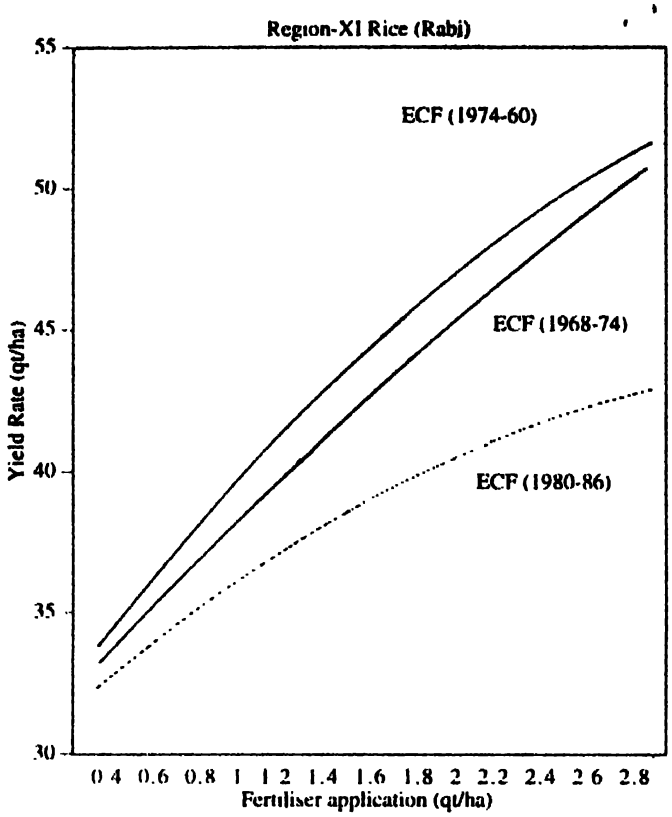
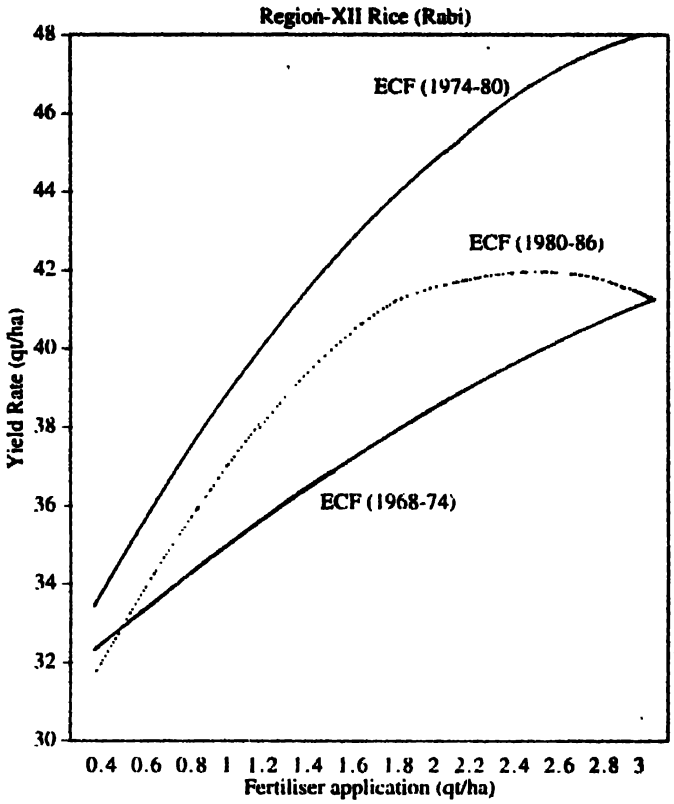
a: Responses over successive triennia; b. Responses with one triennium gap. c. Responses two triennia gap.





painstaking analysis of fertiliser consumption data of NSS (1970-71) and NCAER (1975-76 and 1976-77) his estimate places the fertiliser consumption going to foodgrains at 56 per cent in 1970-71.

We have discussed elsewhere that the series generated by Sarma and Gandhi may have some consistency problems [Vidya Sagar 1994:11-14). Using these consistency checks we fix this share at 70 per cent in 1970-71 and increase it up to 75 per cent during the early 1980s. We also assume it to be stagnant after that due to a shift in the cropping pattern in favour of oilseeds.

One of the problems associated with this type of analysis is applying appropriate yield response coefficients to the new area brought under (i) irrigation, and (ii) high yielding varieties. While most studies apply such coefficients to accommodate for the growth in area under irrigation, expansion of area under HYV is clubbed with fertilisers to derive composite estimates for fertiliser response [Sarma et al 1989].[6] It is argued that it is only in the presence of fertilisers that HYV observe improved yields. However, there is evidence that productivity gains in HYV are achieved even at zero [Parikh et al 1983], or modest levels of fertiliser application [CIMMYT 1989]. Drawing from a number of international studies on the contribution of genetic (modern varieties) and crop management factors (fertiliser, weed control and crop rotation, etc), Lipton and Longhurst [1989:13] point out that genetic contributions account for half or more of the yield gains in irrigated and well watered irrigated areas. Mcguirk and Mundalak (1991), observe for the Indian Punjab,

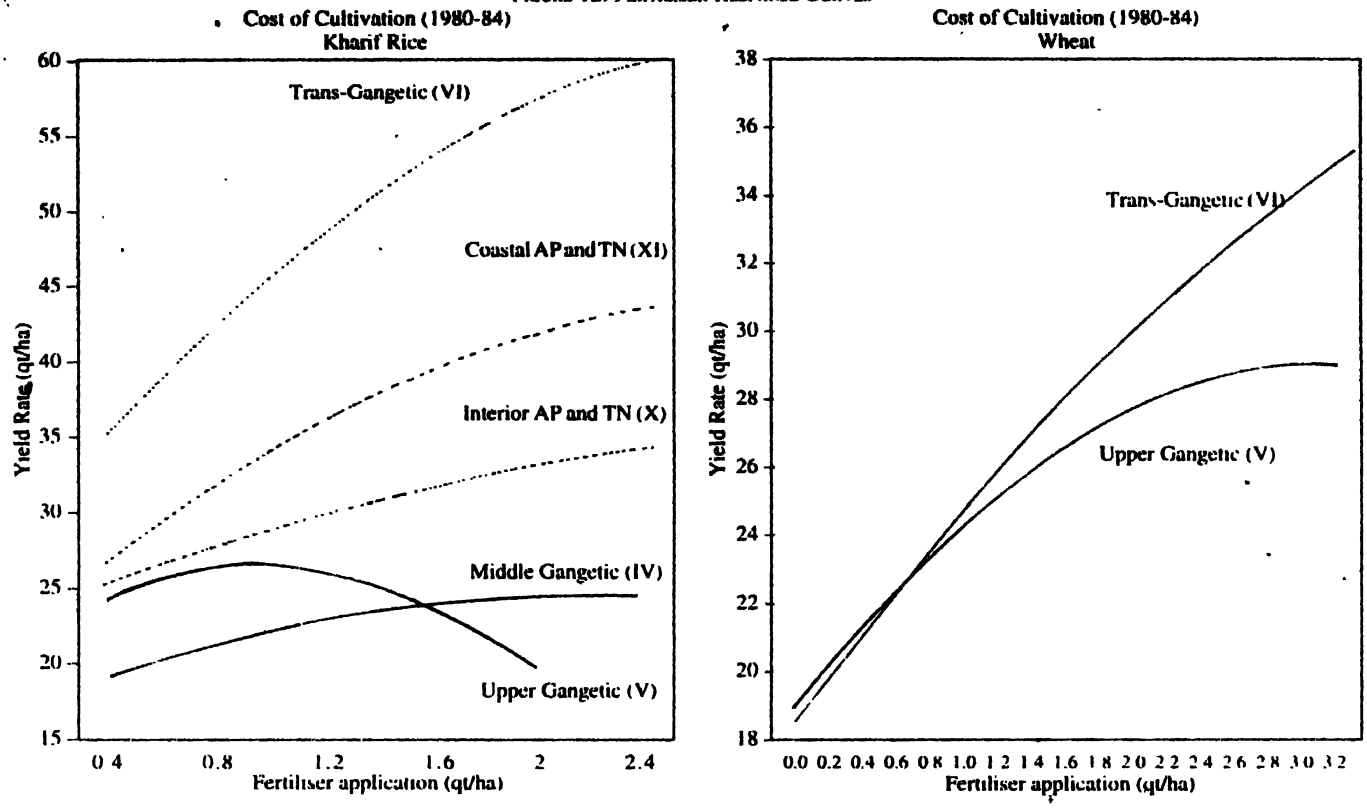
> The empirical results are consistent with the common knowledge that fertilisers are important in increasing yields. However, the direct or intra-technique (implying the use of same variety) effect of fertilisers on yields, holding variety composition constant, is not very pronounced. The main effect is through the change in variety composition [inter-technique - from traditional varieties to modern varieties].

However, higher yields from the modern varieties could not be obtained year after year as extra grain produced via modern varieties would deplete soil nutrients unless this gain has been achieved through a better nitrogen conversion efficiency of the modern varieties. The fact that fertilisers, by themselves may not have been able to push up the growth of foodgrains in the absence of modern varieties, makes it necessary to make adjustments for the area under HYV. The synergistic effect between the two needs to be isolated if proper evaluation of fertiliser responses is to be done. Such a procedure would have been valid in assessing fertiliser response over time (i e, composite fertiliser-HYV response) if fertiliser consumption and area under HYV were expanding

TABLE 5: CLASSIFICATION OF ECONOMIC INEFFICIENCIES AND THEIR POLICY RELEVANCE

Type of Inefficiency	Likely Cause of Inefficiency
Technical inefficiency	
Failure to operate on the production frontier due to errors in the timing or method of application of inputs	(a) Inadequate information (b) Insufficient technical skills (c) Untimely input supply
Constrained allocative efforts	
Errors in allocating input within existing expenditure levels – movement to the expansion path	(a) Inadequate information (b) Market failure in input supply (c) Differential risk effects of inputs (d) Institutions [e g, tenancy]
Scale errors	
Failure to use profit maximising levels of inputs	(a) Capital constraint (b) Risk aversion (c) Inadequate information (d) Institutions (eg., tenancy)

FIGURE 12: FERTILISER RESPONSE CURVES



simultaneously and at the same rate. This, however can not be the case after the entire crop area is brought under the HYV. The area under HYV which was growing rapidly during the 1970s slows down considerably in most of the areas and tapers off to a maximum in others, e g, Punjab during the 1980s. Therefore the synergistic effect of HYV as well as its own contribution cannot be captured during the later period. The fall in composite response to HYV and fertiliser cannot, therefore, be attributed to a fall in fertiliser productivity.

DERIVED FERTILISER RESPONSE FOR CEREALS: ALL INDIA ESTIMATE

Table 2 shows the derived response coefficients of fertiliser use under the two alternatives discussed above, after allowing for a constant response coefficients of 0.5 t/ha each of the change in area under HYV and irrigation, respectively [Vidya Sagar 1978b]. The responses are derived for (a) successive triennia,[7] (b) with a gap of one triennium, and (c) with a gap of two triennia Thus, the observations in the first row show derived fertiliser responses between 1961-64 and 1964-68 under period 1, between 1964-68 and 1968-71 under period 2, etc. The observations in row 2 show fertiliser response between 1961-64 and 1968-71 under period 2, between 1968-71 and 1974-77 under period 4, etc, and the values in row 3 show such responses for 1961-64 to 1971-74 under period 3, 1964-68 to 1974-77 under period 4, etc.

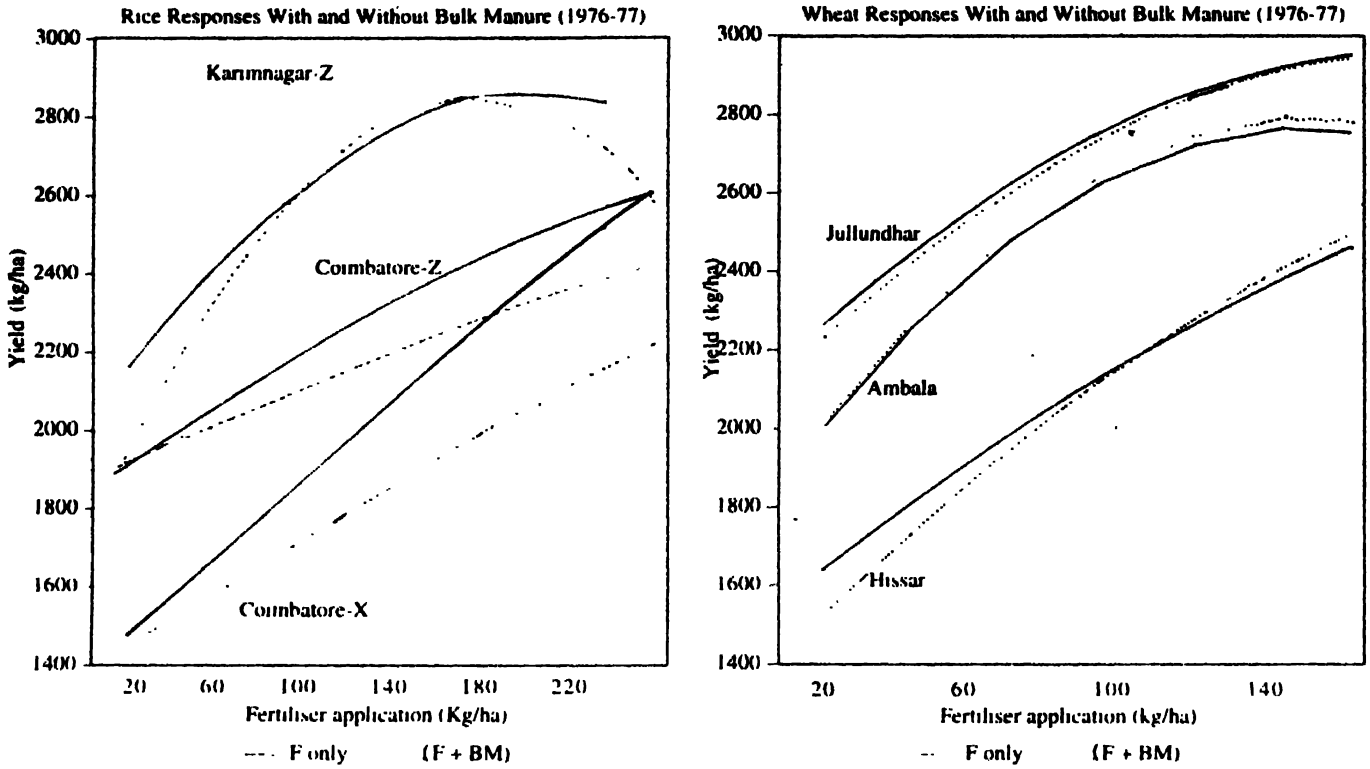
It may be observed that with the assumption of 'constant distribution throughout' the fertiliser response between triennia ending 1970-71 and 1973-74 and between triennia ending 1973-74 and 1974-77 is negative at -8.53 and -1.97 respectively. This perverse coefficient of fertiliser use appears primarily due to a very high growth in area under HYV between triennia ending 1970-71 and 1971-74 on the one hand, and the high growth in irrigated area under cereal crops between triennia ending 1973-74 and 1976-77, on the other. (Disproportionate growth in one component).* If constant coefficients (0.5 t/ha) are allowed both for irrigation and HYV in these two periods, these factors overexplain the production growth compared to the growth in these inputs. Fertiliser use recorded the lowest triennia increases during this period. This might have resulted in an imbalance in the three technology inputs and hence the perverse fertiliser responses. If one assumes zero contribution of both HYV and irrigation during these periods one gets a low value of 2.17 for fertiliser coefficient between period 1968-71 to 1971-74 and if one assumes a modest value of 0.3 for irrigation alone the fertiliser response still becomes zero. However, after the 1971-77 period the derived fertiliser response coefficients gradually increase from 2.07 during 1974-80 to 6.02 during 1977-83, 6.04 during 1980-86 and 7.13 during 1983-90. There is reason to believe, therefore, that the fertiliser responses are not declining during the last two decades.

Similar observation are obtained when the fertiliser distribution derived by Sarma and Gandhi is used. The derived responses now increase to a marginally lower value of 6.62 during the last period (Table 2).

These estimates go well with the average response of 3.5 [Sarma et al 1989] derived from the linear production function (5.5 derived from the transcendental production function). However, contrary to our observation that the fertiliser responses have started improving since the mid-1970s, they argue that the response coefficients actually declined during 1970s and the early 1980s.

On the basis of input response coefficients of 0.45 tonnes/ha for area, 0.57 for irrigation and 0.33 tonnes/ha for a shift from other foodgrain to wheat/rice, and 10 tonnes/ha of nutrient for fertiliser. Sarma et al find that between triennia ending 1961-62 and 1971 72, the difference between output predicted by using response coefficients and input levels and the actual output is only 2 million tonnes (or 2 per cent) indicating that these coefficients broadly hold during this period. However, for the subsequent period of triennia ending 1971-72 to 1983-84 the actual output falls short of the expected output by almost 10 million tonnes. This seems to indicate a decline in one or more of the aggregate input response coefficients. In

FIGURES 13 AND 14



simulating to find which input may be in question, it is found that if fertiliser response coefficient is reduced from 10 to 7, the difference between actual and expected output is reduced to about one million tonnes. This suggests a likely reduction in aggregate fertiliser response coefficient from 10 to 7. Further analysis shows that the fall in input productivity is likely to have been recent and appear to have occurred gradually after 1977-78.

In the light of the arguments advanced earlier (see section on the distribution of fertilisers into crops), we feel that the increase in fertiliser consumption during the second period was much less than that reported by Sarma et al. An appropriate adjustment in fertiliser growth would revise fertiliser response upwards during the later period. But more importantly, the analysis does not include HYV as an explicit factor contributing to the productivity growth. And as discussed above this would seriously underestimate the responses during the later period when the growth in area under HYV tapers off to zero.

Also, the composite fertiliser response (8.6) derived through the production function analysis by Sarma et al seems constant throughout the entire period. Otherwise, the expected values would have shown divergence with the actual values both during the beginning and the end periods. This is not so, as shown by Figure 10 of Sarma et al (1989:49).

We have restricted our state-level analysis to only those states where (a) plantation crops do not vitiate the assumption of constant distribution, and (b) states which lead in the adoption of seed fertiliser technology and on which the hypothesis of a declining productivity of fertiliser is postulated. The states chosen for our analysis are Punjab, Uttar Pradesh, Andhra Pradesh, Tamil Nadu.

PUNJAB

Fertiliser Distribution into Crops: The share of fertiliser consumption in cereal crops is assumed constant. However, in the cropwise distribution of fertiliser consumption a shift in the share of paddy is gradually achieved by diverting the fertiliser consumption from maize to paddy during the later years. After 1974-77 the fertiliser consumption of maize is held constant as its area is continuously declining. This declining area may, at best, absorb the 1975-77 level of fertiliser use under the assumption of an increasing rate of application (given share of 10 per cent applied to lower and lower area).

Response Coefficients. In Punjab too the derived response coefficients of fertiliser use, after netting out HYV and cropping pattern do not indicate a fall in fertiliser productivity during the 1980s. The derived fertiliser response for cereals between triennia ending 1979-80 and 1982-83 is 2.31, between triennia ending 1982-83 and 1985-86 is 4.78 and between triennia ending 1985-86 and 1989-90 is 14.71 (Table 3). Over longer periods, the derived fertiliser response coefficients for cereals are 2.98, 1.23, 3.82 and 7.56 for periods represented by triennia ending 1964 and 1970, 1970 and 1976, 1976 and 1983, and 1983 and 1990 respectively. This again does not show any fall in fertiliser productivity of cereals. On the contrary it has gradually increased from a rather low value of 1 to nearly 8 during the last three periods. And even if one wants to allocate higher quantities of fertiliser going to cereals as done by Sarma et al for the all India analysis, the results would still remain unaffected. This is contrary to the observations on the Indian Punjab discussed earlier in Section I [CIMMYT 1989:12; S Sidhu and Byerlee 1992] which shows that that in Indian Punjab the response ratio has gone down from 10 in the initial years of the green revolution to 7.5 during the later years (Figure 1 – Figure 7 of CIMMYT 1989: Gross relationship between fertiliser use and wheat yield, Indian and Pakistani Punjabs).

If, however, adjustments for the stagnation of yield during the 1970s is made in the above figure, the response ratio during the later period would be at least as large as during the initial years of expansion in HYV and fertilisers.

It would be interesting to examine the evidence given by Sidhu and Byerlee in support of a declining fertiliser productivity.

The authors compute the partial productivity measure of fertiliser as production per unit of fertiliser and observe for wheat in the Indian Punjab that it has tended to decline as the marginal returns to additional fertiliser use have fallen (p 15). The partial productivity of fertiliser (kg/kg of nutrient) in their Table 6 is 25, 18, 18 and 19 for triennia 1972-76, 1977-80, 1981-85 and 1986-89 respectively. If, however, these values are re-computed by adding to fertilisers the nutrient value of the manure applied during the same period[9] the partial productivity values respectively become 21.7, 16.8 17.4 and 18.1 showing a clearly positive trend in the partial productivity measure thus defined. Their estimate of fertiliser productivity measured in this way may be questioned to draw such conclusions. But even if one accepts it as a correct measure of fertiliser productivity, it has not declined during the 1980s. And during the 1970s, the major part of productivity gain may be attributed to the high yielding varieties. Most of technological change coming from modern varieties was completed by the end of 1970s. The growth in total factor productivity may therefore be attributed to input use efficiency alone

Referring to the appropriateness of the productivity measure for concluding a declining fertiliser productivity one may refer to Figure 2. Even if the marginal productivity of fertilisers is held constant (shown by a straight line in the diagram), the average productivity would decline as long as the output at zero level of fertiliser application is positive.[10] And, if such a productivity measure observes increases (as shown above for the 1980s) or even constancy, growth in the efficiency of fertiliser use may certainly be reflected.

Uttar Pradesh

This state clearly observes declining fertiliser productivity if successive triennia are considered during the 1980s. The derived fertiliser responses for cereals between triennia ending 1979-80 and 1982-83 is 11.6, between triennia ending 1982-83 and 1985-86 is 9.0 and between triennia ending 1985-86 and 1989-90 is 6.7.

However, if longer periods are considered this does not hold. The fertiliser response between triennia 1961-64 and 1968-71 is 4.2, between triennia ending 1975-76 and 1982-83 is 5.2 and between triennia ending 1982-83 and 1989-90 is 7.0.

One thing that comes out rather clearly is that during the earlier phases of green revolution, expansion in area under HYV took place without a commensurate increase in fertiliser use or expansion in irrigated areas, the derived response coefficients of fertiliser turn negative implying thereby a lack of synergy between the inputs. Also, in none of the cases analysed, derived responses during the 1980s is negative under the assumption of constant irrigation, and HYV yardsticks of 0.5 t/ha. This is not so during the 1970s.

Andhra Pradesh

Unlike Punjab where irrigated wheat and rice command most of the area under cereals, both in Andhra Pradesh and Tamil Nadu, rice is the major beneficiary of the seed fertiliser technology and commands around 50 per cent of the total area under cereals. Other cereals are mostly unirrigated with large year to year variation. Even triennia averages in this case may not be able to provide a smooth curve [Vidya Sagar 1980]. Therefore, meaningful results can either be obtained by analysing derived response coefficients for rice only or longer periods may be considered to derive fertiliser response coefficients for cereals. Table 4 shows such coefficients for rice derived for successive, one triennium difference and two triennia difference for Andhra Pradesh and Tamil Nadu. The fertiliser responses both for rice and cereals in Andhra Pradesh derived from successive triennia do not show a consistent pattern. When computed over longer periods (with a gap of two triennia), there is a distinct increase in the response coefficients. The response coefficients between triennia ending 1968 and 1977, 1971 and 1980, 1974 and 1983, 1977 and 1986 and between triennia ending 1980 and 1990 are respectively – 0.5, 1.4, 3.8, 3.8 and 5.1 for rice and – 0.9, 3.0, 3.5, 1.2 and 2.3 for all the cereals. The responses for all the cereals do not show an unambiguous picture of increase. This could be due to the fact

Table 6 Yield Response (Kg/Kg of Nutrients) to Fertiliser Application in Various Agro-climatic Regions of India

Region	M P P	Response at F (2:1:1)*					
		90	120	150	180	240	300
Wheat (Irrigated)							
VI Trans-gangetic plains (Punjab, Haryana and Ganganagar in Rajasthan)							
Early **	11 98-3.02F	9 26	8.36	7 45	6 54	4.72	2.92
Recent**	11.06-2.16F	9.12	8.47	7 82	7 17	5 87	4 58
Cost data	8.71-1.90F	7.00	6.43	5.86	5 29	4.15	3.01
V Upper Gangetic Plains (Western and Central Uttar Pradesh)							
Early**	12.54-2.10F	10.65	10 02	9.39	8.76	7.50	6 20
Recent**	14 31-3.62F	11.05	9.97	8.88	7 80	5 62	3 45
Cost data	8.30-3.14F	5.48	4.54	3.60	2 66	0.77	-1.12
VIII Central Plateau (Eastern Rajasthan and Western Madhya Pradesh)							
Early	8.38-1.14F	7.36	7.01	6 68	6.33	5.65	4.96
Recent	15.27-3.28F	12 32	11.33	10.35	9 37	7.40	5 43
Cost Data	7 31(statistically insignificant)	–					
IV Central Gangetic Plains (East U P and Bihar)							
Early	9.65-1 56F	8 24	7 77	7 30	6.83	5.89	4 97
Recent	1 94-2.35F	9.82	9.12	8.42	7 71	6.31	4.89
Cost Data	3.96-1.02F	3.04	2.73	2.43	2 12	1 51	0 90
Rice (Irrigated)							
XI (Coastal Andhra and Tamil Nadu)							
Early	9.12-0.89 F	8.32	8.05	7 79	7.52	6 98	6.45
Recent	8.27-1.25 F	7 14	6 77	6.40	6.02	5 27	4.52
Cost data	17.92-6.18 F	12.36	10 50	8.65	6.80	3 09	-0.61
VII Eastern Madhya Pradesh							
Early	11.93-3.75 F	8.55	7.43	6.30	5.18	2 93	0 68
Recent	12.63-3.10 F	9.84	8 91	7.98	7.05	5 18	3.53
Cost Data							
VI Trans-gangetic Plains							
Early	10.72-1.14 F	9 70	9.36	9.02	8.68	8 00	7 31
Recent	9.98-0 99 F	8.99	8 69	8.39	8.09	7 50	6 90
Cost	25.57-9.84 F	16 71	13.76	10.76	7 86	1 96	-3 95
IV Middle Gangetic Plains							
Early	8.76-1.19 F	7.68	7.32	6.96	6.61	5 90	5.18
Recent	12.76-2.66 F	10 37	9.56	8 77	7 97	6 37	4 78
Cost data	8.39-3.92 F	4.86	3.69	2.51	1 33	-1.02	-3.37

Notes: * Nutrients N, P_2O_5 and K_2O applied in the ratio 2:1:1 in ECF (Early and Recent). In the case of the Cost data no such restriction is observed

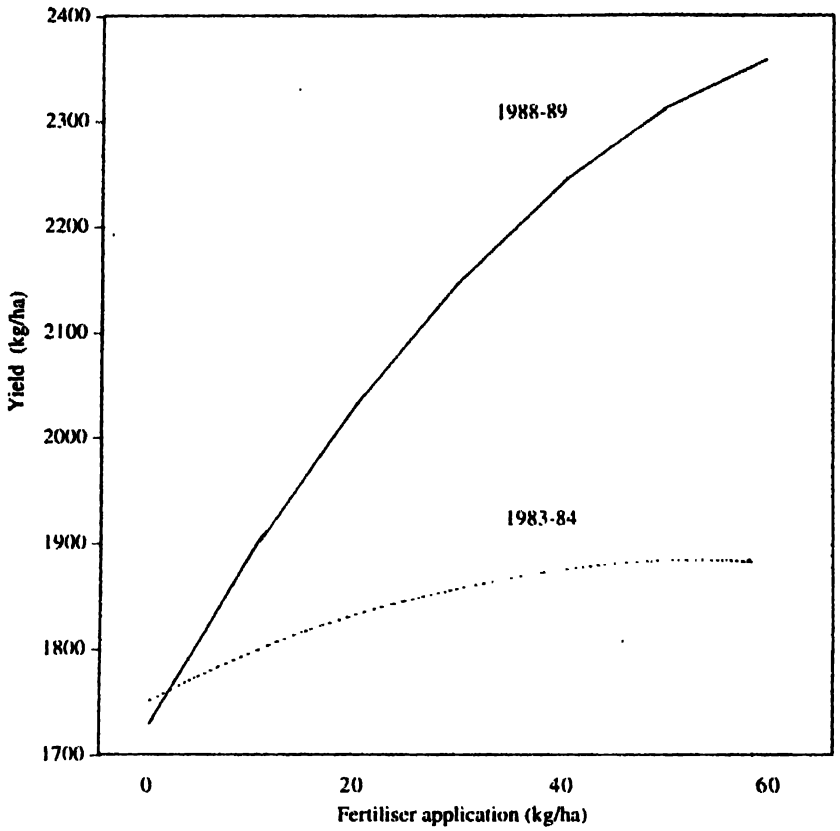
F refers to the level of fertiliser application, MPP refers to the marginal physical productivity.

Early and Recent refer to the mean response derived from the Experiments on Cultivators fields (ECF) data for the periods *1968-74 and 1980-86* respectively The cost data refers to the responses derived from the uncontrolled data of the 'Comprehensive Scheme on Cost of Cultivation' for the period *1980-84*.

Source: Derived from the estimated response equations in Centre for Agricultural and Rural Development Studies (CARDS), 1990, op cit.

FIGURE 15

Shifting Response Curves with Extension – Pali (Rajasthan) Crop: Wheat



that after 1974-77 area under cereal crops has declined by over 20 per cent while we maintain the ratio of fertiliser going to cereals as constant. If appropriate adjustments are made in fertiliser consumption the derived response for the last period is 2.9. This simply shows a constancy of the response. On the other hand, fertiliser responses for rice the area under which has remained constant since 1974-77 show a clear increase from 1.4 to 5.3. Even if one presumes increasingly higher share going to rice, the derived responses may not observe a decline. However fluctuations in the derived demand coefficients for one or two triennia differences still leaves some doubt about their status.

III
Yield Response to Fertiliser Use

Micro-Level Analysis of Irrigated Wheat and Rice

A gradual shift in the growth of fertiliser consumption from areas which have traditionally been major consumers of fertiliser and are also the mainstay of growth in foodgrain production in India to other areas where the level of fertiliser use is less, is now visualised by many. The former are the areas well endowed with irrigation and infrastructural facilities. It is argued that the level of fertiliser use in such well endowed areas has reached the saturation point. The fall in the use efficiency of fertilisers in India may therefore be attributed to over concentration of fertilisers in these areas. Further growth in fertiliser consumption therefore shall have to be on rain-fed areas and in crops other than wheat and paddy.

It is in this context that one would be interested in examining the behaviour of fertiliser responses in areas of better production environment and areas which have yet to develop their potential fully. How have such regions as Punjab and better endowed areas of Tamil Nadu and Andhra Pradesh performed since the 1970s?

The term 'economic efficiency'[11] may be dis-aggregated into (a) technical efficiency, and (b) allocative efficiency. A farm (or a system) is technical efficient if it operates on the production frontier. This is the potential frontier and may be estimated from experimental data. Allocative efficiency is measured in terms of divergence between marginal value product (MVP) of an input and its normalised price. The ratio of MVP to the factor price is often referred to as the value to cost ratio (VCR). Values of VCR different from one are indicative of allocative inefficiency. Under the assumption of diminishing MPP value of VCR greater than one implies under use of the resource while VCR less than one indicates its over use.

Causes of Economic Inefficiencies

Early interest in economic efficiency centred on the question of whether small farmers of the third world were economically rational and price responsive. This question is no longer seriously debated. Rather, economic efficiency should be viewed only as a standard by which to judge resource productivity against its potential. As such, interest now centres on system inefficiencies that cause resource productivity to fall below its potential. These system inefficiencies,

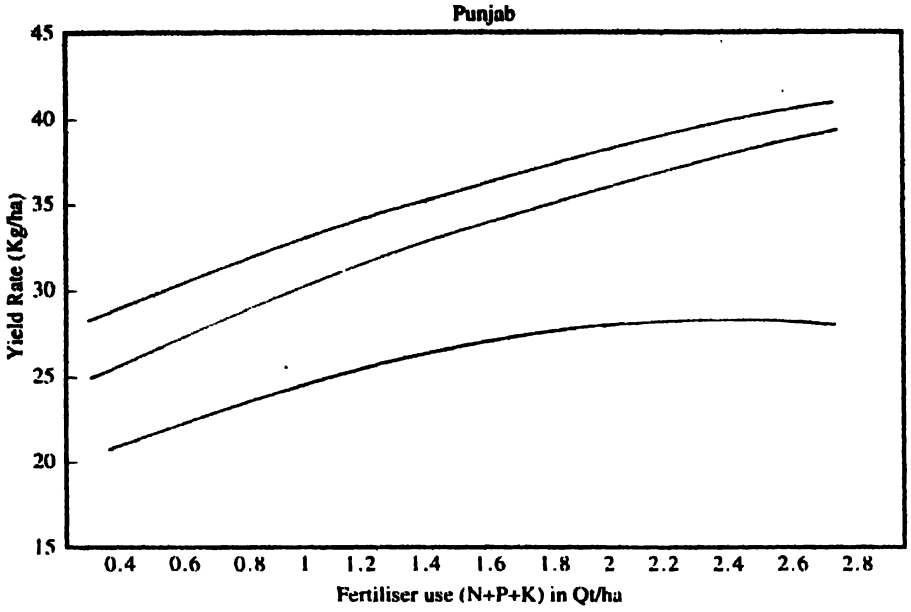
TABLE 7. MARGINAL PHYSICAL PRODUCTIVITY (YELD RESPONSE) OF FERTILISER (N+P+K) AT MEAN LEVEL OF APPLICATION (BASED ON LINEAR RESPONSE FUNCTION)*
(Wheat)

Year	District	Variety	MPP	Mean Level of Fert Application
1974-75				
	Amritsar	HYV	3.99	99.18
	Kapurthala	HYV	2.13	110.00
	Kapurthala	HY*	3.02	108.23
	Hissar	HYV	6.64	63.39
	Chittorgarh	HYV	13.42	53.38
	Jaipur	HYV	7.16**	45.89
1976-77				
	Hissar	HYV	4.43	87.07
1977-78				
	Hissar	HYV	3.05**	124.57
	Kapurtnala	HYV	2.29	136.67
	Chittorgarh	HYV	6.34	81.43
	Jaipur	HYV	10.13	40.57
1979-80				
	Ambala	HYV	3.77	100.47

Notes: * The second degree coefficients are not statisically significant even at 20 per cent level though with expected signs in most cases.

** Shows Fertiliser Yield Response less than combined response of Fertiliser and FYM after converting both to nutrients.

FIGURE 16: WHEAT YIELD IN RELATION TO FERTILISER
Punjab



which may be both internal and external to the farmer, and their relationship to the different categories of inefficiencies are shown in Table 5.

Technical inefficiency due to inappropriate timing and method of using an input is likely to reflect inadequate information and technical skills on the part of farmers, although factors external to farmers, such as untimely input supply, may be important in some cases. Allocative errors may also reflect inadequate information and skills especially for the constrained case, but other factors such as risk aversion, capital constraints, institutional constraints (eg, tenancy), interdependence of production and consumption decisions in farm households, and failures in input markets are also expected to play an important role, especially in determining scale errors. Many of these factors, such as input market failures, are exogenous to the farmer. The failure to use even the most efficient technique of production due to inadequate information suggests that the cost to the individual farmer of acquiring better information is greater than the benefits because of failure in information markets. Therefore, the presence of inefficiency in resource use at the arm level is not inconsistent with the hypothesis of the rationality of small farmers.

The two concepts of inefficiency are not altogether independent and in practice one may be attributed to the other. Low allocative efficiency due to over use of (say) fertilisers may in part be due to high technical inefficiency.

Thus in terms of Figure 3 below if the estimated response in a given farm situation is R-2, large number of farmers may be operating on the range where VCR is less than one simply because the fertiliser recommendation (F_r) based on experimental or semi-experimental response functions (R-1) are adopted.

Similarly, allocative inefficiency may be the reason behind the observed technical inefficiency when aggregate fertiliser ($N+P_2O_5+K_2O$) is used as the input [see Ali and Byerlee 1991:7 for the effect of such aggregation on technical versus allocative efficiency].

MEASURING ECONOMIC EFFICIENCY FROM FIELD DATA SPECIFICATION OF THE MODEL AND THE DATA

One way of measuring inefficiency in fertiliser use is by computing the number of cases which are applying doses in excess of the fertiliser use where VCR is one[12]. This can be easily computed from a fertiliser response function of the second degree in fertiliser application with or without other variables. A general form of such response function may be represented as

$Y = \alpha + \beta F - \delta F^2 + c\,BM + d\,Hsize + e\,Rn + f\,Dmg + g\,Irr;\ \beta,\delta>0$. Where,

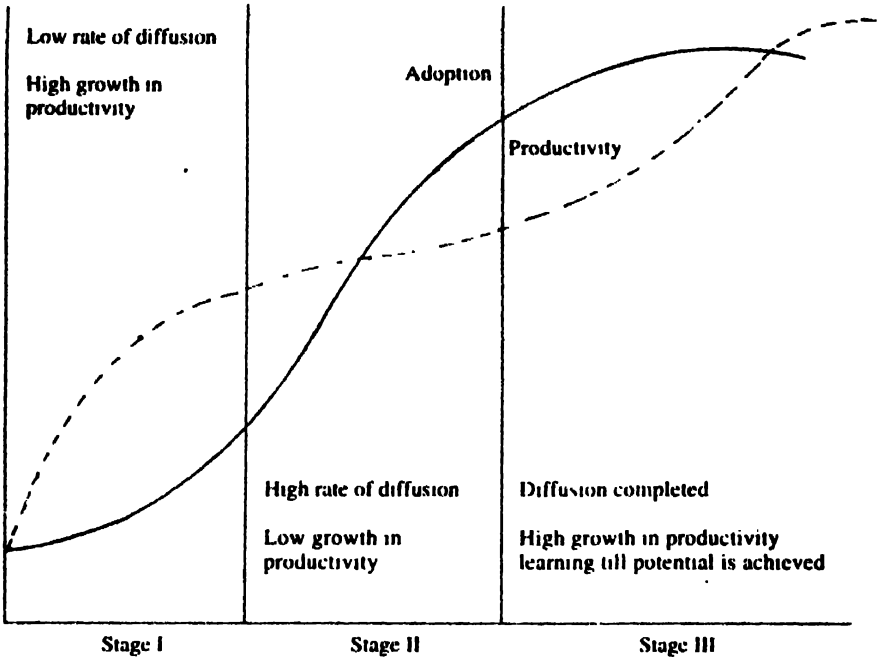
BM	=	Bulk manure,
Hsize	=	Size of holding,
Rn	=	Total rainfall,
Dmg	=	Crop Damage,
Irr	=	Whether irrigated.[13]

We have relied mainly on data obtained from, (i) Experiments on cultivators fields (ECF) of the All India Co-ordinated Agronomic Research Programme,[14] (ii) cost of cultivation data, (iii) high yielding varieties programme (HYVP) evaluation data of the 1970s and (iv) Monitoring-cum-evaluation sample surveys of the Rajasthan Agriculture Extension and Research Project. The sampling design of both the ECF data as well as the HYVP data develop estimates at the district level. The sample size for HYVP evaluation survey is between 70 to 90 both for high yielding and local varieties in each

TABLE 8: MARGINAL PHYSICAL PRODUCTIVITY (YIELD RESPONSE) OF FERTILISER (N+P+K) AT MEAN LEVEL OF APPLICATION (BASED ON LINEAR RESPONSE FUNCTION)*
(HYV Rice)

Year	District	Season	MPP of Total F N+P+K	Mean Level Application
1974-75				
	Hissar	X	8.49**	71.56
	Karimnagar	Y	3.88	109.89
	Coimbatore	Z	5.12	151.26
1976-77				
	Hissar	X	10.23	98.41
	Amritsar	X	11.72**	105.04
	Kapurthala	X	5.58	83.31
	Madurai	X	2.41	130.50
	Chitoor	Y	11.53	58.59
	Guntur	Y	3.53**	84.71
	Madurai	Z	7.57	143.79
1977-78				
	Amritsar	X	5.35	118.89
	Kapurthala	X	5.24	128.84
	Guntur	Z	2.21	162.21
	Chitoor	Z	2.95	108.24
	Coimbatore	X	1.18	210.11
	Coimbatore	Z	1.22	189.77
	Madurai	Z	2.43	180.01

Notes: * The second degree coefficients are not statiscally significant even at 20 per cent level though with expected signs in most cases.
** shows Fertiliser Yield Response less than combined response of fertiliser and FYM after converting both to nutrients.



district for a given year. However, since the ECF districts are chosen to represent various agro-climatic regions in which they lie, such estimates may be valid for their respective regions as well. The estimates based on the 'cost data' are meant to represent either agro-climatic regions within a state or the state itself.[9]

Labour has not been used as a separate input in the above specification as most of the variables are in the form of tasks performed and include labour in the performance of a task.[10] The yield function for the ECF data does not include variables other than fertiliser while those based on HYVP survey use most of these variables. Interaction terms corresponding to fertiliser and irrigation and fertiliser and FYM were initially put into the above specification but these were rarely found to be statistically significant. Hence these were dropped. The responses have been obtained at the mean level of the respective variables (other than fertilisers) included in the above specification.

The yield response to fertiliser use (or fertiliser response) is the marginal physical product of fertiliser and is defined as physical change in yield rate for a unit change in fertiliser application. This is a declining function of the level of fertiliser application and may be obtained as the first derivative of the yield function with respect to fertiliser, viz. $(\beta-2\delta F;\ \beta,\delta>0)$ The magnitude of the response coefficient depends on the two parameters, viz. β and δ. β represents the linear component while δ represents the quadratic component of the response curve and shows its curvature. The four possible combinations of β and δ are shown in Figure 4. A profitable level of fertiliser application depends on the value of these parameters. Thus, a zero value of δ implies that fertilisers could be used profitably in the entire range of application if β exceeds the relative price of fertiliser. A low value of δ also extends the use of profitable application while a high value restricts it. We shall not discuss in the following analysis the intercept of the yield function.

EXPERIMENTS ON CULTIVATORS FIELDS

We shall first report observations on responses derived from experiments on cultivation fields (semi-controlled data). ECF is one of the many components of the All India Co-ordinated Agronomic Research Programme (AICARP). It is designed to test the yield response to changes in varieties, irrigation level and fertiliser application under field conditions. Not only the farmers chosen under ECF get the benefit of expert knowledge on the mode and timing of application of the fertilisers, such farmers may also interact with the experts on the other farming practices. To the extent such responses are affected by these factors while most farmers using fertilisers are not aware of the right practices (in the beginning at least), the latter's response could be lower than the ECF/SFT [Vaidyanathan 1978]. It is in this context that the fertiliser responses derived from the ECF are considered as semi-controlled. Such experiments are conducted with various nutrient combinations such as N_{30}, $N_{30}P_{30}$, $N_{60}P_{30}$, $N_{60}P_{30}K_{30}$, $N_{90}P_{60}K_{30}$, $N_{90}P_{45}K_{45}$, $N_{120}P_{60}K_{30}$, $N_{120}P_{60}K_{60}$ ...etc, so that it is possible to derive yield response to Nitrogen(N) for various levels of phosphatic(P) and potassic(K) nutrients. Similarly, a yield response to phosphatic fertilisers could be obtained for various levels of N and K.

Estimates of yield response functions for various agro-climatic zones of India for major crops using fertilisers are provided by CARDS (1990). The yield response functions are estimated, primarily, to work out fertiliser requirement for additional yield over control

TABLE 9: PERCENTAGE OF FARMERS USING FERTILISERS BEYOND THE OPTIMAL (VCR<1) (Wheat)

Year/District	Variety	Level of Fertiliser Application		MPP	Application Higher Than the Optimal (Per Cent)			
		Mean	Optimal		0–10	10–20	20–40	>40
1	2	3	4	5	6	7	8	9
1974-75								
Chittorgarh	20	23	70	10.0	–	10	–	–
Hissar	32	32	91	13.2	–	–	–	–
Amritsar	HY*	99	94	4.7	–	–	–	44
	HYV	91	165	6.0	–	7	–	–
1976-77								
Chittorgarh	20	32	50	5.5	–	28	–	–
	26	82	251	6.6	3			
	HYV	83	243	6.0	–	6	–	–
Ambala	27	59	86	8.0	–	17	–	–
	31	30	60	11.2	–	6	–	–
	HYV	60	100	9.2	–	13	–	–
Jullundhar	HYV*	104	119	3.4	–	–	37	–

Notes: HY .Shows different high yielding varieties
HYV* Shows all the high yielding varieties
Var . Variety, M : Mean level of fertiliser application
O .Optimum level of fertiliser application
Out of 34 district of Rajasthan, Haryana, Punjab, Tamil Nadu and Andhra Pradesh of years 1974-75, 1976-77, 1977-78, 1979-80, for crops wheat and rice, 23 districts showed significant number of farmers using fertilisers beyond the optimal.

different agro-climatic regions and do not cover most of the dimensions of fertiliser use discussed here. Such functions have been estimated for three time points, viz, early', 'middle' and 'recent'. The time points 'early' and 'recent' refer to the six-year periods of 1968-74 and 1980-86. The estimates are generated by using all the experiments conducted on a crop during six years in a given agro-climatic zone to eliminate weather induced fluctuations. The fertiliser use refers to the nutrient application of N, P_2O_5 and K_2O in the ratio of 2:1:1, e g, $N_{30}P_{15}K_{15}$, $N_{60}P_{30}K_{30}$, $N_{90}P_{45}K_{45}$, etc. As shown in Table 11, in most of the cases the responses are superior when fertilisers are used in combinations of N, P and K instead of pure nitrogenous fertilisers. Yet, the 2:1:1 ratio may not give the maximum fertiliser productivity as this depends more on the nutrient balance in the soil. The farmers, who have a free choice of the NPK ratio or have exact knowledge of the nutrient deficiency in the soil may actually get higher productivity in the conditions under which such experiments are conducted.

Table 6 shows marginal physical productivity (MPP) of fertiliser use at different levels of application for irrigated wheat and irrigated rice in major crop growing zones. It may be observed that responses derived from ECF data are fairly high even at high levels of application. Besides, curvature in response curves based on ECF data is small implying thereby that fertiliser could be profitably used at levels as high as 300 kg/ha, in better endowed areas. In irrigated rice (kharif) for example, the yield responses at 240 kg/ha is more than 5 kg/ha of nutrient both during 1968-74 and 1980-86 in most of the cases. Amongst the major rice (kharif) growing areas, the yield response to fertiliser use has increased in less developed regions, viz, middle Gangetic plains (region IV) and eastern plateau (region VII) while in the developed region such responses have marginally declined.

In wheat also yield response to fertiliser use during both the periods exceeds 5 kg/ha of nutrient at 240 kg of application, but the responses have generally improved during 1980-86 period as compared to 1968-74 (Table 6, also see Figures 5 to 10).

Results from Uncontrolled Data

Responses under the actual field conditions are obtained from two sources. The middle period (1974-80) yield responses are derived from experiments conducted in actual field condition (uncontrolled data from High Yielding Varieties Programme Evaluation Survey) for which primary data were made available by the IASRI.

The recent period responses are based on the CACP data drawn from the Comprehensive Scheme of Cost of Cultivation for the period 1980-84, and derived from the estimated response equations in the study conducted by the Centre for Agricultural and Rural Development Studies (CARDS), discussed above.

HYVP Evaluation Survey of the 1970s: The high efficiency of fertiliser use obtained from the ECF data discussed above is not observed during the 1970s under field conditions. The middle period (1974-80) yield responses obtained from experiments conducted in actual field conditions are very low in comparison to the ECF responses. Tables 7 to 10 summarise such results for paddy and wheat crops respectively.

In many cases the coefficient corresponding to the quadratic component of fertilisers was found to be statistically insignificant even at 30 per cent level. In all such cases this component was dropped under the assumption that within the available data range on fertiliser use the responses are linear. We shall first discuss these responses (based on linear specification) before passing on to response functions of the second degree.

It may be observed from Table 7 that these responses, in general, decline with an increase in the level of application across different regions or districts. This is clear from the wheat results in the north India. Thus, at low levels of application of 40 kg/ha (1977-78) and 53 kg/ha Jaipur and Chittor (Rajasthan) observe responses as high as 10 and 1, respectively. Kapurthala (Punjab) on the other hand, observes a response of 2.1, (1974-75) and 2.29 (1977-78) at mean level of 108 kg and 137 kg of nutrients per hectare. Hissar district of Haryana observes a response of 6.64 at 63 kg (1974-75), 4.43 at 87 kg (1976-77) and 3.05 at 124.57 kg (1977-78). The neighbouring district of Ambal observes a response ratio of 3.8 at 100 kg/ha. These points neatly fit into a diminishing MPP curve. The points appear to be representing the same response curve across various locations [for details see Vidya Sagar 1994:41]. This also shows that responses are poor even at around 100 kg of fertiliser application. Further increase in application critically depends on increasing the use efficiency of fertiliser.

Similarly, in paddy (Table 8), the response were as low as 1.2 in Coimbatore during 1977-78. This corresponds to a level of

Table 10: Percentage of Farmers Using Fertilisers beyond the Optimal (VCR<1) (Paddy)

Year/ District.	Level of Fertiliser Application					Application Higher Than the Optimal (Per Cent)			
	Season/Variety		Mean	Optimal	MPP	0-10	10-20	20-40	>4
1	2	3	4	5	6	7	8	9	1(
1974-75									
Coimbatore	X	HYV*	174	307	6.1	7	-		
Guntur	Y	01	68	75	4.6	–	–	-	4(
Amritsar	X	HYV	109	153	11.9	-	–	25	-
Kapurthala	X	HYV	89	244	11.1	-	2	-	
Hissar	X	10	60	82	5.6	-	-	20	2(
1976-77									
Coimbatore	X	HYV*	194	251	4.4	--	-	21	
Madurai	X	HYV*	131	193	5.1		-	22	-
Guntur	Y	04	112	105	2.8	-	-	-	5(
Chitoor	Y	04	105	100	2.9		-	36	
Karimnagar	Y	04	105	83	1.8	–			7(
Chitoor	Z	16	137	120	0.8	-	-	-	7(
		HYV	130	111	2.1	-		25	5(
Guntur	Z	01	78	92	4.9	–	–	-	4(
Karimnagar	Z	15	121	67	1.7		-	-	8(
Coimbatore	Z	81	187	118	1.1	--			9(
		HYV*	175	205	3.6	-	-	24	-
Madurai	Z	09	190	396	4.9	2			-
1977-78									
Guntur	Y	04	88	86	3.6	–	–	-	4(
		HYV*	107	119	–	–	-	37	-
Karimnagar	Y	04	102	115	6.7	--	-	-	5(
Karimnagar	Z	01	88	74	2.2	–	–		5(
Coimbatore	Z	04	198	185	2.4	–	-		5(
		HYV*	190	116	0.9		-	-	8(
Hissar	X	02	90	191	15.4	4	–		-
Jullundhar	X	HYV	110	185	12.0	4	-	-	-

Notes: Var :Variety, M : Mean level of fertiliser application.
O :Optimum level of fertiliser application.
MPP :Marginal Physical Product (yield response) at the mean level

application of 210 kg in kharif-rice and 190 kg in summer rice. Generally, in most of the traditional paddy growing southern districts, where the level of application was high very low responses were observed. The only exception was Chitoor (winter-rice) where a response of 11.5 was observed corresponding to a low level of application of 59 kg. On the other hand, in new areas of the north-west India the responses were generally high. However unlike wheat, these points do not show to be representing the same MPP curve. But if the points representing north Indian rice districts are removed from the rice set, the remaining points fit into a linear or a quadratic MPP curve fairly well [Vidya Sagar 1994:42]. At least two fertiliser response surfaces are represented by the district level MPPs in rice, each representing the rice growing areas of the north and the south.

Hissar (Haryana) and Amritsar (Punjab) in 1976-77 was 10.2 and 11.7 corresponding to 98 kg and 105 kg of application respectively. In 1977-78 however, the responses both in Kapurthala and Amritsar districts of Punjab were low at 5.3 corresponding respectively to a level of application of 119 Kg and 129 kg of nutrients.

Tables 9 and 10 summarise such results for some of the important paddy and wheat growing districts of India respectively. This also shows value of response at the mean level of application which may be compared to the linear responses discussed earlier. It may be observed that in wheat, the responses exceed 10 when the mean rate of application is around 30 kg or lower. This is the case in wheat, with Chittorgarh (Rajasthan) and Hissar (Haryana) in 1974-75 and Ambala (Haryana) in 1976-77. On the other hand responses are low corresponding even to moderately high doses. However, in most of the cases these responses exceed 5.

Similarly, in paddy also, in traditional paddy growing southern districts of Andhra Pradesh and Tamil Nadu show poor response which corresponds to fairly high level of fertiliser application. In most of the new areas of Punjab and Haryana, where fertiliser application rates are around half of the corresponding rates in south these responses are high.

In most of the districts of Andhra Pradesh and Tamil Nadu, often the profitable level of fertiliser application falls far short of the average level of application. This implies that most of the farmers were applying fertiliser doses in excess of the economically viable doses in such areas. For example, in all the three districts of Andhra Pradesh in 1976-77 [winter(Y) and summer (Z) rice] optimum doses were less than the mean level of application. Between 50 and 94 per cent of the farmers in these areas were applying fertiliser doses, 40 per cent or above, higher than the economic dose. This would happen even where the optimum lies very near to the mean level. This phenomenon is also seen in Punjab and Haryana but there the proportion of cultivators applying doses in excess of the optimum is very small in paddy. The responses are generally higher in wheat than in paddy.

The Cost of Cultivation Data for the 1980s: As against the very low curvature observed with ECF data, the response curves obtained from uncontrolled data (both HYVP and Cost data) have either sharp curvature with high linear response or low linear response (curves II and III of Figure 4). The details are shown in Table 11. Often the linear component of these curves is high— mostly higher than the ECF curves. But, a very high quadratic coefficient makes these responses fall sharply. In region VI, for example, the linear component of the response curve is as high as 25.6 for the cost data as against 9.98 for ECF data during the early 1980s. Similarly, in another agriculturally advanced region XI (coastal Andhra), its value is 17.92 for the cost data as against 8.27 for ECF data of the 1980s. However, a strong quadratic component makes the two responses equal in the range of fertiliser application of 1.80 to 2.00 Qt/ha. After this the responses based on cost data sharply decline.

The relative performance of fertiliser response on cultivators' fields may be seen in Figures 5 to 11, which compare ECF responses to responses based on cost data (see Table 9).

In well endowed regions, viz., Punjab and Haryana (region-VI) on the one hand and coastal Andhra and coastal Tamil Nadu (region XI) on the other, the responses derived from the cost data are as good as the ECF responses within the range of cultivators' fertiliser application. This is true both for irrigated rice and irrigated wheat. Indeed, at the lower application rates the responses from cost data are much higher than the responses derived from ECF data. However, within a short range beyond this mean level

TABLE 12: COMPOSITE YARDSTICKS OF ADDITIONAL PRODUCTION (RESPONSE RATIO) FROM THE USE OF FERTILISER*

		$N_{1:0}$	$N_{80}P_{40}$/ $N_{80}P_{40}K_{40}$
Kharif Rice	Andhra Pradesh	10.9	12.7
	Bihar	14.1	18.0
	Karnataka	10.8	17.7
	Madhya Pradesh	9.0	15.3
	Tamil Nadu	9.5	12.0
Rabi Rice	Andhra Pradesh	10.1	12.8
	Karnataka	12.6	17.5
	Tamil Nadu	9.0	12.6
Wheat	Bihar	12.3	13.9
	Haryana	12.9	13.2
	Punjab	10.9	15.4
	Uttar Pradesh	13.4	16.4

Notes: * Based on ECF of AICARP 1967-76. To estimate the average yardstick for a given level of fertiliser dose the average response for the district from all the trials in the district in a year was obtained. The average response over the years was taken as the response for the district for estimating the yardstick. The estimate for the state was then calculated by averaging the yardsticks over all the districts within the state.

Source: Leelavati C R and S R Bapat, 'Yardstick of Additional Crop Production, Origin and Development', in Prem Narain et al 'Souvenir Volume of IASRI New Delhi, released on the occasion of ICAR Golden Jubilee (1929-79)'.

TABLE 11: LINEAR AND QUADRATIC COMPONENTS OF THE PHYSICAL RESPONSE FUNCTIONS DERIVED FROM HYVP (1977-80), COST (1981–84) AND ECF (1980-86) DATA

Crop	Region		Type of Data		
			HYVP**	Cost	ECF
Rice	IV (middle Gangetic)	Linear	17.4	8.39	8.27
		Quadratic	6.7	1.96	1.33
		Ratio	2.60	4.28	6.22
	VI (Punjab and Haryana)	Linear	14.63	25.57	9.98
		Quadratic	2.15	4.92	0.495
		Ratio	6.80	5.20	20.16
	XI (coastal Andhra)	Linear	6.13	17.92	8.27
		Quadratic	1.40	3.09	0.625
		Ratio	4.38	5.80	13.23
Wheat	IV (middle Gangetic)	Linear	11.5	3.96	11.94
		Quadratic	4.40	1.02	2.35
		Ratio	2.61	3.88	5.08
	VI (Punjab and Haryana)	Linear	10.65	8.71	11.06
		Quadratic	2.86	0.95	1.08
		Ratio	3.72	9.17	10.24

Note: ** The HYVP response coefficients, in rice (Kharif), refer to Hissar (region-VI)-HY variety 02 pooled for the years 1976-77, 77-78 and 1979-80, Guntur (Region XI) - all HYV for the year 1976-77 and Mongher for the year 1977-78. The corresponding figures for Mongher during 1976-77 are 16.75, 6.0 and 2.8 respectively. In wheat the reference districts are Ambala (1977-80) and Saran (1977-78) respectively for the regions VI and IV.

Source: Computed from Tables 6 to 9.

of fertiliser application the response coefficient sharply declines due to the strong curvature in case of cost data. This makes the cultivators of the two agricultural regions efficient within the range of their application levels.

Comparing 'cost of cultivation' fertiliser responses with ECF responses is similar to estimating technical efficiency of a production environment by estimating production function from experimental data. The fact that experiments are conducted on farmers fields with some of the variables left un-controlled ensures that this 'engineering response' function is representative of the farmers' conditions.

The price of 1 kg nitrogen in term of paddy varies between 3.4 kg to 4.4 kg during the early 1980s. In the case of wheat it varies between 3 kg to 3.6 kg. Therefore, the optimal level of fertiliser application in paddy would be 2.2 Qt of nutrients in region VI and 2.25 Qt of nutrients in region XI. The average level of fertiliser application during the early 1980s is 160 kg in wheat (1983-84) and 213 kg in paddy (1982-83) in Punjab (cost of cultivation data). At this level of application the response ratio in wheat would be 5.7 (cost data) in the region VI. In paddy the corresponding figure is 4.61. The average farmer would, therefore, be just near the optimal point. Any further increase in fertiliser consumption, in such circumstances, could either be due to an increase in its use efficiency or an increase in the price of foodgrains relative to fertilisers. While we do not have later information on the use efficiency of fertilisers, the relative price of fertilisers certainly has declined. This might have contributed to a still higher level of consumption.

The same cannot be said about the less developed agricultural regions such as Gangetic plains (see Figure 6). Here the responses generated from the cost data are far below those generated from ECF data. In wheat for example, the responses derived from cost data during (1980-84) for the region IV (middle Gangetic) and region V (upper Gangetic) are far below these derived for region VI (Punjab and Haryana). The range of profitable application in the Punjab region is 274 kg as against 153 kg in region V and only 45 kg in middle Gangetic region IV. Figure 12 compares responses generated from the cost data alone in various agro-climatic regions.

Figures 7 and 8 show response curves for the agro-climatic regions VI and XI during 1970s (HYV evaluation survey) and 1980s (ECF and cost of cultivation data). The response curves derived from the uncontrolled data during the 1970s (HYVP) have considerably improved in these regions during the 1980s (cost data). However, the shift in the response curves which is visible for these agriculturally advanced regions of the country is not visible in other regions.

It is observed earlier that the curvature in response curves obtained from uncontrolled data of the HYVP evaluation survey is high during the 1970s. This sharpness seems to have diluted during the 1980s, at least in some regions. The uncontrolled data of the comprehensive scheme analysed for the early 1980s shows a higher range of profitable application both in wheat and in paddy in agro-climatic region VI. Similarly, the responses corresponding to the agro-climatic region XI for paddy show a higher range of profitable application. These are the two regions where new technology took roots. These are the regions which have gained maximum experience in the use of seed-fertiliser technology and which were the highest consumers of fertiliser in India ever since large-scale use of fertilisers on field crops took place. It may be for this reason that these areas learnt from their experience and gradually improved their use efficiency [17] This point is further discussed in Section IV.

Nutrient Imbalance

This also raises questions as to why the curvature of response curve under uncontrolled conditions is high. One of the probable reasons for this appears to be the imbalance in fertiliser application The ECF response have been obtained by using the three nutrients in the ratio of 2:1:1. The cost of cultivation data does not show any such ratio in which nutrients are applied. However, the overall consumption patterns during kharif indicates the three nutrients are used in the ratio of 16:4:1. Table 12 clearly shows the importance of balanced application on the basis of ECF data. The response to the application of 120 kg of nitrogen alone is less than the composite response obtained by applying it in combination with phosphatic and potassic fertilisers. Thus the pure response of nitrogen, in kharif rice, at 120 kg of application is 9, 9.5 and 10.5 as against 15.3, 12 and 17.7 respectively when same quantity of nutrients are applied either at $N_{90}P_{30}$ or $N_{60}P_{30}K_{30}$ in Madhya Pradesh, Tamil Nadu and Karnataka. Similar observations may be noted for rabi rice and wheat. In Punjab, for example, the wheat response is 10.9 at N_{120} as against 15.4 at $N_{90}P_{30}$. The imbalance in fertiliser application could therefore, be an important cause of the sharp curvature in response curves derived under actual field conditions.

The hypothesis is supported by the evidence of HYV evaluation survey data of the 1970s. An analysis of the responses of individual nutrients, viz, N, P_2O_5 and K_2O confirms the imbalance in nutrient application. Tables 13 and 14 shows such responses at the mean level of application of N and P for rice and wheat crops. In Amritsar (HYV rice, 1974-75) the fertiliser response at the mean level of 109 kg of N and 10 kg of P was 10.9 and 30.6 respectively. In Kapurthala (Punjab) the two responses are 8.7 and 14.5 for N and P respectively. Similarly, in Kapurthala in 1976-77 fertiliser response of N is only 4.8 at 68 kg while that of P is 15.4 at 15 kg. Indeed in several cases response of P is insignificant at moderately high level. Similar is the case in wheat (Table 14). In Hissar, for example, the fertiliser response of N (variety 27) at 52 kg, 63 kg and 62 kg is 4.1, 5.0 and 6.5 respectively during 1974-75, 1976-77 and 1977-78. Corresponding figures for P are 15.4 kg, 25.3 kg and 14.4 kg at 6 kg

Table 13: Marginal Physical Productivity of N and P in Trans-Gangetic Region VI (Punjab and Haryana) (Paddy)

Year/ District	Variety	Marginal Physical Product		Mean Level of Application	
		N	P	N	P
1974-75					
Amritsar	HYV	10.9	30.6	109	10
Kapurthala	01	8.7	16.3	75	36
	HYV	8.7	14.5	72	31
Hissar	HYV	11.1	11.7	63	8
	09	10.5	15.1	43	3
1976-77					
Kapurthala	01	4.8	15.4	68	15
Hissar	HYV	11.1	10.7	83	10
	01	8.6	13.1	85	8
	06	13.3	26.8	51	5
1977-78					
Amritsar	HYV	0.0	12.2	94	22
	02	9.9	14.1	90	24
Hissar	01	8.1	16.2	78	18
1979-80					
Hissar	02	5.7	11.7	82	21
	04	6.6	12.1	46	9

respectively during the three years [also see, Biswas 1991; Biswas and Benbi 1989 and Panda and Sahoo 1989].

Alternately, one may look for the response functions with bulk manure, which is more balanced in its composition, added to fertiliser consumption after converting it to the nutrients.[18] Two different observations may be made from the re-estimated response curves. In Punjab and Haryana the combined response curve simply coincides with the fertiliser alone response curve. This implies that a quintal of the bulk manure substitutes for one kg of inorganic nutrients and the conversion ratios are approximately correct.[19] This, however, is not the case with the re-estimated response curves of rice in the peninsular India. The curves simply shift horizontally, implying thereby that more nutrients are needed to attain the same level of productivity (Figures 13 and 14) [also see Nambiar et al 1989].

The problem is much more serious, however, in areas of low fertiliser consumption, with low responses. Pali in Rajasthan is a typical case of this, where throughout the 1980s[20] the fertiliser application rates were low in a low response regime.

It is in this context that one brings forth the importance of extension programme in improving the efficiency of fertiliser use. Figure 15 shows a gradual improvement in fertiliser response curves during the 1980s in Pali. Now that most of the states have an extensive extension machinery, this source may be properly utilised to make a more efficient use of fertiliser.

Lastly, it would be interesting to refer back to the question of using bulk manures either as a supplement or as a substitute of chemical fertilisers. Referring to the response functions of 'fertilisers alone' and 'fertilisers plus manures' it may be argued that one quintal of manure could be a good substitute for one kg of chemical fertilisers and its use may be promoted as an environmentally benign alternative to chemical fertilisers. However, two factors must be considered while going for such an option. The first factor is the availability of manures to replace the quantum of fertilisers being used now. With the type of changes in the composition of crops, particularly in north India, and with the replacement of animals by machines the availability of bulk manures may not be able to meet the increasing requirements of nutrients. The 1974-75 data on wheat, of the HYVP evaluation survey, for example, shows an average consumption of 29 qt and 31 qt of bulk manure as against 107 kg and 98 kg of chemical fertilisers (nutrients) in Jalandhar and Patiala respectively. This implies that nearly 25 per cent of the nutrients were obtained from organic manures. In 1987-88, consumption of manures in wheat in Punjab is reported to be 8 qt as against 183 kg of chemical fertilisers (cost of cultivation data). This implies that less than 5 per cent of nutrients were obtained from organic manure in 1987-88. This may happen due to a number of factors such as the relative price of alternative sources of nutrients, cost of application, etc. Even if one assumes that the total volume of the available bulk manure remains the same, the ratio of nutrients derived from organic manures to chemical fertilisers must have gone down. In short, in view of the increasing demand for nutrients and limited availability of farm yard manures, manures may not completely substitute for fertiliser. The availability of cheap fertiliser (the fertiliser prices have remained largely constant over a decade now implying thereby a continuous decline in relative prices of fertilisers) might be another factor responsible for a continuous decline in the share of manures in total application of nutrients.

Ever since Grewal and Rangi (1983) brought to focus the negative environmental impact of over-fertilisation in Punjab, this aspect has drawn more than due attention. However, often, researchers are interpreting data wrongly to show that the farmers are increasingly using more than the recommended doses of fertilisers. Inder Pal Singh, Grewal and Sankhayan (1992), for example, conclude

> The adoption level of fertiliser has been on the increase in Punjab. The per cent of the farmers using fertiliser doses higher than the recommended level increased from 22 per cent during 1981-82 to 62 per cent during 1987-88. A tendency towards over use of this costly resource is more out of ignorance. The use of fertilisers has crossed the limits dictated by the economic calculus as the investment in fertilisers does not pay for its cost even at the state level. This is evident from the body of their Table 3 that the cumulative per cent of farms using fertilisers nutrients up to 110 kg/ha declined from 23.11 during 1981-82 to 10.37 during 1985-86 and then to 8.85 per cent during 1987-88. Whereas, those using higher doses of fertilisers than the recommended level of 187.5 kg per hectare increased from 22 per cent to 40 per cent and then to 62 per cent during the same period. A critical evaluation of the yield level *vis-a-vis* the fertiliser use during different years indicated that the yield levels have not increased in proportion to the use of fertilisers. This shows that the irrationality in fertiliser use in Punjab has increased over the years.

However, an examination of their Table 3 (Appendix Table A-1) clearly shows that response curves are not only shifting but also rotating upwards. This makes a one point recommended dose irrelevant and the farmers would in fact be wiser to increase fertiliser use for optimising their profits (Figure 16 below).

This comes out very succinctly from the data given in another paper on wheat in Punjab. Table 3 of Bal et al (1992) show that the profit maximising levels of fertiliser use increase from 95 to 241; 27 to 435 and 57 to 238 kgs per hectare respectively in zone I, zone III and over all zones from 1980-81 to 1990-91.

TABLE 14: MARGINAL PHYSICAL PRODUCTIVITY OF N AND P IN TRANS-GANGETIC REGION VI (PUNJAB AND HARYANA) (Wheat)

	Variety	Marginal Physical Product		Mean Level of Application	
		N	P	N	P
1974-75					
Amritsar	37	15.9	11.9	85	15
Kapurthala	11	7.2	14.4	38	5
Hissar	HYV	6.4	8.0	56	6
	26	14.2	36.7	65	5
	27	4.1	15.4	52	5
1976-77					
Amritsar	HYV	3.2	5.6	64	21
Hissar	HYV	4.8	8.5	70	13
	27	5.0	25.3	63	8
1977 78					
Kapurthala	HYV	5.2	0.0	82	43
	36	3.1	0.0	79	40
Hissar	27	6.5	14.4	62	6
	37	13.3	38.0	76	18
1979-80					
Ambala	HYV	8.1	0.0	73	27
	31	3.1	15.8	46	12
	40	8.7	0.0	69	27
Hissar	HYV	5.9	12.2	76	29
	26	6.9	9.4	79	26
	37	4.4	17.8	74	30

IV
How Should Fertiliser Use Efficiency Improve

The observation on the improvement in fertiliser productivity in the better endowed regions of the north-west India on the one hand, and the coastal belt of Andhra Pradesh and Tamil Nadu on the other, has significant policy implications. But before that, how have these regions been successful in increasing fertiliser productivity while others have not? Since most of the available literature on factor productivity in India, in general, and in these areas in particular emphasises decline in fertiliser productivity due to over-fertilisation, search for an explanation and evidence supporting the above would be futile. Indeed at the back of all these pessimistic observations of declining fertiliser productivity lies the assumption that farmers were always on the efficiency frontier and throughout moved along this frontier while increasing fertiliser application during last three decades. This, ignores the possibility of moving towards efficiency frontier from within it during the initial phases of ineffciency.

We start our explanation by emphasising that farmers were never on the efficiency frontier initially and a shift from the realised inefficient production surface to more efficient production surface did take place in secure production environments.

A fertiliser response curve may shift vertically and rotate higher if better seed varieties are continuously available to the farmers who adopt these varieties and at the same time learn to optimise the yield potential of these varieties. On the other hand, a realised inefficient response surface may shift and rotate by increased understanding of the new technology through extension efforts and through trial and error by the farmers themselves.

It is possible that the improvement in fertiliser responses in region VI (Punjab and Haryana) is the result of varietal improvements caused by continuous research efforts in this area. This is no doubt a strong argument. Continuous improvement of varieties is not only necessary to shift production surface upwards, it is necessary even to maintain the earlier levels. Evolving insect and disease bio-types in the existing varieties make it imperative to continuously adopt new varieties. Otherwise, the productivity may decline over time due to depletion of soil nutrients or pest build up in intensive cropping systems [Winkelman 1987]. This comes out sharply from the analysis of Flinn et al (1983), who observe a continuous decline in the yield of IR-8 since its introduction in 1968 at the rate of 0.15mt/ha/year in the wet season and twice this amount in the dry season on the experimental farms of IRRI. The declining yields are implied to be consequences of a build up of soil toxicity – a result of irrigation with alkaline high borate water. The intensive cropping of rice ...also probably contributed to build up of insects and diseases. While authors mention, as probable causes of decline, zinc deficiency or boron toxicity as well as build up of the pests which the variety is susceptible to, they do not analyse their results in terms of the nutrient imbalance. This imbalance in the nutrients may also have contributed to this decline.[21]

Whether it was the new varieties or the fertiliser and other management practices that shifts the fertiliser response curves upwards in region VI, region XI or elsewhere, may be examined from the responses generated from the ECF data for the period 1968-74 and for 1980-86.

The process of evolving new seed varieties in Punjab and Haryana has been more successful than elsewhere. Whether or not the new seeds were able to push up the production surface under the semi-controlled field conditions (ECF) can be observed from Figures 5 and 7 for the region VI (Punjab and Haryana). While the 1980-86 ECF curve is marginally better to the one for the period 1974-80, it is below the response curve of the period 1968-74. The new varieties of wheat in this region could barely maintain the fertiliser responses (Figure 7) In the upper Gangetic region the fertiliser response curve during 1980-86 maintains the 1968-74 level, but it is still below the 1974-80 level (Figure 8).

In rice, while the response curve in the trans-Gangetic plains (regions VI) considerably shifts upwards, during 1980-86, in upper Gangetic plains (region V) and in the south Indian regions (X, XI and XIII) it observes a decline. However it is only marginally different in the coastal regions of Andhra Pradesh and Tamil Nadu. Elsewhere the decline is substantial. Thus, while regions VI (Punjab and Haryana) and XI (coastal Andhra and Tamil Nadu) maintain their initial fertiliser responses, other regions observe a substantial decline in the yield potential of the high-yielding varieties. This, then, should be an important reason for the better performance of region VI and XI over other regions. However, except in the case of rice in region VI, an upward shift in the response curve under mass applications of fertilisers does not come from the improvement in the yield potential of HYV.

A higher technical efficiency of the two better endowed regions of India therefore must be explained in terms of other factors. Having utilised the major sources of growth, viz modern varieties and irrigation opportunities for future growth from fertilisers substantially depend on non-genetic gains in inputs through the use of new inputs as well as through more efficient use of existing inputs to exploit the genetic potential of the existing varieties [Byerlee 1989]. These 'second generation inputs' are management-intensive – that is, they require more information and skills than the earlier introduction of new varieties and nitrogenous fertilisers [Kahlon 1984]. The highest returns to input management are obtained from deciding whether to use or not to use a particular input in a specific circumstance and how and at what level that input is used However, the complexities of the management increase more than proportionately increase with the number of uncertainties in the system. Where farmers have to cope with year-to-year variation in climatic factors, assured irrigation can greatly enhance management capacity, but where, uncertainties resulting from the non-availability of inputs such as irrigation, electricity, diesel, fertilisers, etc. are additional to climatic uncertainty, the capacity of the 'management input' is greatly affected.

Ali and Byerlee (1991) observe that in the present-day agriculture economic efficiency should be viewed only as a standard by which to judge resource productivity against the potential. As such, interest now centres around 'systems inefficiencies' that cause resource productivity to fall below its potential. These systems inefficiencies may be both internal and external to the farmers. Technical inefficiency, resulting from inappropriate timing and method of using an input may largely be caused by such systemic factors (failures) as untimely supply of inputs, such as seeds and fertilisers and credit, but more importantly, failure in the timely release of canal water and electricity for irrigation. Another factor could be the consolidation of land holdings during the 1970s and the 1980s in Punjab. This coupled with the fact that the higher classes of landed peasantry are likely to have better access to education, extension services and technology, must have effected fertiliser productivity in Punjab

Farmers' capacity to respond to technical constraints depends largely on the systems in which he is operating. In a more stable production environment the attainment of efficiency is quicker as against an environment of uncertainty. In the latter case farmer would be chasing a *continuously moving target*. His difficulties would be compounded manifold in the dynamic context where new varieties are frequently released to maintain resistance against the evolving insect and disease bio-types

It is not difficult to argue that the farmers in the two better endowed regions in the north-west and south-east coast enjoy a much better system support – not only of research and extension but also of timely and adequate input supply. For, these are the regions on

which the governments' requirements for its public distribution system so critically depend.

Feder et al (1988) observe that in the trans-Gangetic region of India farmers' knowledge about modern agricultural practices appears to be much better, but away from these areas farmers' information scores are generally poor. Ali and Byerlee in their extensive review of evidence on technical inefficiency find knowledge and experience in handling new technology, education and extension contact as the critical factors. While the farmers in the two regions certainly have longer experience in the use of new technology, their score on education as well as excess to research and extension systems may be equally high.[22]

This still leaves us with the question as to why farmers in the two regions were not so efficient in fertiliser use during the 1970s. We may tentatively advance the following explanation.

It has been observed earlier that the growth of the three inputs of the new technology did not occur in a synchronised way. The growth of area under HYV during the early 1970s was very rapid where fertiliser consumption grew at a much slower pace. This deprived the realisation of synergy between the two. It is for this reason that if a constant response of 0.5t, most of which is synergy, is attributed to the shift to HYV, negative fertiliser responses are observed during the early 1970s (discussed earlier in Section I).

More importantly, however, the interaction between diffusion of the new technology and the inefficiency in the adoption of the package may explain this behaviour of fertiliser response. As the early adoptors of HYV experienced to remove inefficiency, more and more farmers entered into the inefficiency trap[23] (during the process of adoption and gaining experience - learning). The early adoptors during this period had improved their technical efficiency but the volume of inefficiency created by the new entries more than neutralised their gains at the macro level. But as the number of those with adequate understanding of the technology increased, fertiliser response started improving [for details see Vidya Sagar 1993:9-10 and its Figure 2] It may be for this reason that stagnant yields of wheat are observed in the CIMMYT study (1989). This is also clearly reflected in the yield response computations of Narayana and Parikh (1987:307, Table 2.10). Elsewhere this gain in efficiency has been affected by two factors. First, the diffusion of new technology is not yet complete in the sense that more areas are still being brought under HYV, on a more uncertain resource base. Secondly, the uncertain production environment of these regions keeps even the earlier adoptors from fully exploiting the production potential.

If above observations on the behaviour of fertiliser productivity in various parts of India are correct, some implications for policy do emerge. First, given the fact that fertilisers remain one of the critical inputs for agricultural growth, future growth in its consumption cannot be achieved without improving its productivity. Extension systems and the soil testing facilities need to be fully geared to meet the challenge. Second, as long as it is possible to push up production of the main cereals, viz rice and wheat, in agricultural zones which still show potential for higher use of fertilisers, more fertilisers in these areas may be used, notwithstanding arguments in favour of environment-friendly nutrients.[24] The nitrogen conversion efficiency of such regions should be higher than the regions of low fertiliser productivity. This is essential to maintain growth in the overall foodgrain production. Third, areas where fertiliser productivity in the two major cereals is not high may opt for a crop mix other than the one that is suitable for well-endowed regions. Indeed the shift in the crop mix in large parts of India which were first to adopt the new technology may at least partly be explained in terms of this argument. All over the country, in areas which observe sub-optimal fertiliser productivity in wheat/rice, there has been a shift in the cropping pattern in favour of oilseeds and cotton during the 1980s.

A successful productivity improvement programme pre-supposes minimisation of risk factors and uncertainty. Pushing up fertiliser use with the help of official machinery in an uncertain production environment may not yield the desired results. A minimum level of holding is needed to help a cultivator fully understand and adopt optimal input levels. The synergy between land size and level of education may be an important factor in improving fertiliser use efficiency in Punjab.

The inverse size productivity relationship is usually explained in terms of the higher use of labour. Higher use of labour does not increase labour productivity to warrant higher wages. Better access to knowledge, technology and experience in a more stable production environment should, therefore, be the key to faster productivity growth.

Conclusions

(1) During the 1970s the level of fertiliser application varies a great deal across various HYVP districts. Not only the pattern of declining marginal productivity of fertiliser is observed in a single district, it also holds true for different districts. The resources decline with the increase in the mean level of application across various locations. This implies that during the 1970s a single fertiliser response curve depicting diminishing marginal productivity could be obtained from various HYVP districts.

The 1980s experience of the cultivators data (cost of cultivation) does not show this. In this case the response at the same level varies a great deal. At 180 kg of application the response is as low as 1.33 in mid-Gangetic region as against 7.86 in trans-Gangetic region and 6.80 in coastal Andhra Pradesh.

(2) Compared to the 1970s the response curves in the agriculturally developed regions have shifted upwards implying an improvement in the use efficiency of fertilisers. If efficiency of fertiliser application in the semi-controlled condition

Appendix

Table A-1 Wheat Yield in Relation to Fertiliser ($N + P_2O_5$) Use in Punjab

Fertiliser Application (Kg)		Cumulative Per Cent of Farms			Average Yield During		
Range	Average	1981-82	1985-86	1987-88	1981-82	1985-86	1987-88
Up to 50	40	4.5	3.7	1.4	19.6	23.7	26.5
50-70	60	6.5	6.4	4.2	20.6	29.5	31.5
70-90	80	12.6	8.4	7.3	27.9	29.8	31.2
90-110	100	23.1	10.4	8.9	27.2	24.8	33.2
110-130	120	33.7	18.4	12.9	25.2	30.9	32.6
130-170	150	66.8	46.8	38.4	29.6	32.3	34.1
170-190	180	77.9	59.5	44.4	29.8	34.9	37.8
190-230	210	95.0	88.6	86.7	29.9	38.8	37.2
230-250	240	97.5	93.7	91.6	29.4	38.6	40.6
250 and above	270	100.0	100.0	100.0	34.3	37.5	40.2

Source: Singh I P, S S Grewal, and P L Sankhayan, (1992): *Input Use efficiency in Areas of Intensive Agriculture: A Case of Punjab State*, Table 3 Summary reported in *IJAE*, Vol 47, No 3.
Estimated response curves shown in Figure 3.8 are as below:

1981-82 $Y = 16.78 + 10.73 F - 1.87 F^2$ $R^2=0.80$
(4.86) (1.55)

1985-86 $Y = 21.22 + 9.29 F - 1.00 F^2$ $R^2=0.83$
(5.39) (1.71)

1987-88 $Y = 25.00 + 8.18 F - 0.89 F^2$ $R^2=0.93$
(2.89) (0.93)

(ECF) is considered as the norm both in trans-Gangetic region and coastal region of Andhra Pradesh and Tamil Nadu, then this level in the use efficiency was achieved within the extended range of fertiliser application. Fertiliser application could now be profitably extended to much higher levels than during the 1970s in these regions. Indeed, this is one of the important factors in increasing fertiliser application in the developed agriculture of India.

(3) This analysis does not show that the efficiency of fertiliser use in India has declined primarily due to the extension of fertiliser rates in *agriculturally advanced regions*, to very high levels. On the contrary, it is the less developed regions which show low fertiliser application combined with low to very low use efficiency.

(4) Compared to the ECF response curves the curvature of response curves derived under field conditions is large. A possible reason for this may be imbalance in the nutrient mix. While ECF responses are derived with nutrient mix in the ratio of 2:1:1, in actual field condition it is found to be as different as 16:4:1. Application of farm yard manure (FYM) which is more balanced in its nutrient contents is found to reduce such curvature and shift the response curve to the right thereby increasing the profitable range of fertiliser application.

(5) Agricultural extension network has been found to be instrumental in improving the use efficiency of fertilisers in the low response areas of Rajasthan. This needs more emphasis for a further improvement in use efficiency and therefore for higher consumption of the nutrients.

Notes

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1 Parikh et al however do not take this stand and try to explain the existence of zero MPP in terms of errors in the measurement of fertiliser use (p A 38).

2 In fact fertiliser use was not found to be correlated with land size. This contests Parikh's hypothesis on selling fertiliser by the small land holders to the large holders thereby creating errors of measurement in the variable on fertiliser use.

3 The latest NCAER survey (1989-90) on fertiliser use in India suggests that fertiliser use has become more diffused across regions, crops and into un-irrigated areas. However, it still maintains a bias in favour of agriculturally better endowed regions and irrigated or wet crops. Its diffusion to un-irrigated dry land areas and crops is only limited.

4 NCAER has repeated its survey during 1988-89, but the results are not available to the researchers for wider use. See, NCAER, (1991).

5 We are ignoring the impact of some of the other inputs such as labour (manual and draught), machinery and power, some of which (e g, labour) may not be a constraining factor and others even though constraining (e g, electricity) may not be under the control of the cultivators. Such quantities, therefore, may not be the determining production change.

6 This is sometimes done to avoid the problem of multicollinearity in the regression models.

7 Triennium averages of agricultural production/productivity are generally found to remove weather induced fluctuations at the state level.

8 See for further evidence on this Narayana and Parikh (1987). Their analysis reports negative response to HYV for assumed positive response to fertiliser use. It may be argued that within a certain range constancy or lower growth in one factor may accommodate higher growth in other factors but not universally.

9 This may be done by converting the quantity of manure given in the table 1 of Sidhu et al at the rate of 0.5 per cent of N, 0.25 per cent of P_2O_5 and 0.25 per cent of K_2O. See chapter 3 on the validity of such conversion for Punjab.

10 The level of fertiliser use does not include the nitrogen present in the groundwater used for irrigation. Even if it is added to the total of fertiliser consumption conclusions about the improved fertiliser efficiency during the 1980s may not be affected [see Grewal and Rangi 1983 and Singh et al 1987].

11 The theoretical discussion is based on Ali, M and D Byerlee (1991).

12 Factually, one should take as optimum value of VCR higher than 1 because application of F also implies labour cost of application besides the cost of fertiliser purchase. Depending on the cost of application a feasible VCR may vary in the range of 1 to 1.1.

13 The present analysis considers mostly irrigated cultivation of Whear/Rice. In 'Experiments on Cultivator's Fields' (ECF) some practices are controlled, e g timing and quantity of fertiliser application, while others are left to the choice of the farmer.

14 These experiments are conducted under semi controlled conditions (see for details AICARP reports).

15 The results of the analysis based on different sources of data may not be strictly speaking comparable.

16 All direct inputs and tasks performed are specified in such a way that separate labour input is not necessary and in case it is used we shall probably get insignificant coefficients [see Parikh, and Mosley 1983, Bliss and Stern 1981].

17 For an extensive survey of literature on the impact of experience, education and extension see Ali et al (1991).

18 Bulk manure was converted to nutrients by applying the conversion ratio of 0.5 per cent N, 0.25 per cent P_2O_5 and 0.25 per cent of K_2O.

19 The share of bulk manure in total nutrient supply during the 1970s has been substantial. The 1974-75 data on wheat, of the HYVP evaluation survey, for example, shows an average consumption of 29 qt and 31 qt of bulk manure as against 107 kg and 98 kg of chemical fertilisers (nutrients) in Jullundhar and Patiala respectively. This implies that nearly 25 per cent of the nutrients were obtained from organic manures.

20 The response curve keeps on shifting to the right.

21 The paper describes the results of a continuous experiment over 15 years on the same blocks of an IRRI experimental station. A split plot layout is employed with four levels of nitrogen application at 0,60,90 and 120 kg of nutrients per hectare. While other cultural practices are mentioned in the paper the use of phosphates or potash or the bulk manure is not indicated.

22 While the general level of literacy in the two regions may not be very high, the affected population - mostly well to do farmers - must score better than their counterparts elsewhere.

23 In fact, it may be rational for decision-makers in the short run to deliberately introduce inefficiencies in order to learn about the response to new input [Welch (1978) quoted in Ali et al 1991: 7].

24 In fact this is not yet very clear that ground water pollution due to leaching does not occur with organic fertilisers. In fact nitrification in the drinking water around habitations in developing countries is more due to leaching of human and livestock wastes [see Convey 1989: 194-97].

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Always a Borrower Be

Deena Khatkhate

The World Bank's Lending in South Asia by S Guhan; Brookings Occasional Papers, The Brookings Institution, Washington, DC, 1995; pp v+81.

IT is a common refrain in countries like India, which often borrow from the multilateral financial institutions, that their policy-makers tend to become hostages to these institutions' blandishments. In the world we live in, to expect aid without advice is utopian and therefore some persuasion by the aid-givers, whether gentle or otherwise, is ineluctable. But to equate such advice with intellectual seduction of policy-makers in developing countries is to draw a red herring across the trail. Yet such assertions have been repeated times without number. The present study is important not only for its low-key and laidback analysis of World Bank lending to South Asia over the last four decades but also for exploding the myth of borrowing countries' obsequiousness to the multilateral lending institutions. The author's credentials are impeccable and his authority to undertake this study is unchallengeable. He has negotiated loans with the World Bank and other agencies, having been a high official of the central and the state governments; he has been an alternate executive director of the World Bank representing India during the mid-1960s but was never on its staff; and his writings, since he left the government, on diverse topics of Indian economic policies, centre-state relations, politics and music testify to his palpable intellectual and personal integrity and the objectivity of his analysis.

This slim monograph is part of a larger and comprehensive history of the World Bank being written by a specially-appointed team of outside experts in co-operation with the Brookings Institution in Washington, DC. Though it has the imprimatur of the World Bank, it is by no means a command performance, as the authors of the main history, among whom is John P Lewis, have been given full freedom in evaluating the performance of the World Bank. If there is a bias in the analysis, it could be only that of the authors.

As Guhan mentions at the very beginning of his study, South Asia "contains some of the oldest and largest borrowers of the World Bank group and includes India, its largest single borrower. Containing a fifth of the world's population and perhaps three-quarters of its absolute poor, South Asia has been, and will continue to be, a prime theatre of involvement of the Bank." Seen in this perspective, the findings in the monograph can be taken as reflecting the overall policy and strategy stance of the World Bank in its lending operations covering other parts of the borrower universe. Guhan, however, is careful to add a rider in regard to the evaluation that he has made. "Whereas this review is confined to a window of time, the Bank is a continually evolving organisation, and therefore some of the judgments made here are likely to have only a transient validity."

First let the facts speak for the World Bank's lending oeprations since the 1950s. Total cumulative Bank lending to South Asian countries (India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan and Maldives; China is excluded as it became a Bank client only in the 1980s) has been around $ 50.6 billion. India with total commitments of $ 35.3 billion has been the largest single borrower from both the Bank and IDA, the rest accounting for the remaining $ 15.3 billion of the total Bank group commitments. The IDA share has been $ 27.8 billion, almost 55 per cent of the total. In IDA again India has the lion's share of $ 17 billion. This means that there has been a great deal of concessionality in the Bank group's lending to South Asia, though since 1970s there has been a significant loss of concessionality, with progressive diversion of IDA lending to Africa.

The Bank group's lending since the 1970s and 1980s, because of a shift in the sectoral pattern of project lending towards less import-intensive investment, involved substantial local procurement of goods and services for which domestic producers could bid. India in particular was the major beneficiary of a procurement policy, being well-endowed with a sizeable and diversified manufacturing capacity. In late 1980s, "disbursements for local procurement in India were about 50 per cent to 60 per cent of total disbursements". This was a great boon to India as "to this extent the project lending of the Bank provided free foreign exchange to the borrower, that is, foreign exchange usable for the indirect external costs of Bank projects, for projects and non-project imports, other than those financed by the Bank (developmental or otherwise) or debt servicing, or for augmenting reserves" and "counterpart funds arising from such foreign exchange provided budget support".

Bank lending to the South Asian countries has passed through many vicissitudes and at times was even interrupted due to policy considerations which Guhan calls "implied conditionality". The so-called policy considerations meant a moratorium on repayments and nationalisation policies in the case of Pakistan, insistence on Bangladesh honouring its share of liabilities of undivided Pakistan and restraint on the early nationalisation policies and leftist postures of Sri Lanka during 1961-65 and 1970-77. What is striking is that India escaped the implied conditionality despite its bank nationalisation policies in 1969 as the Bank group's lending to India maintained its upward trend. However, while nationalisation policies could be a policy matter, it is not clear whether a moratorium on repayment by a borrower could be so classified. Even in regard to nationalisation, the Bank's policy has not been consistently hostile to the borrowers. The Bank was prominent in lending to private sector coal mines in India but it opted out of 'local development' when coal mines were nationalised in 1973. However, this was a short interregnum as it resumed its lending to the nationalised coal sector in India after 1984.

Those who have been shouting about the World Bank dictating policies to the governments of the borrowing countries will be sobered by Guhan's perceptive and penetrating observations on how the Bank's lending programmes are implemented. Guhan is critical of the Bank because "the Bank's leverage in India, for instance, has been lax and weak" and thinks that it should have been more effective. Citing the experience of the power sector, well supported by the Bank loans, Guhan raises a question "whether the Bank should have tried to exercise more effective leverage earlier instead of allowing problems to accumulate to the extent they have in India's power system. As a practical matter, the Bank's only recourse would have been to withdraw from lending in an attempt to enforce financial and other covenants, but such a course, considering the size of the loan in the energy sector, would have considerably slowed achievement of its

lending targets, besides disrupting additions to capacity in this crucially important sector." The Wapanham report quotes chapter and verse on this issue. Guhan laments that "because of the unquestioned funding of power needs", the Bank has acquiesced in postponing reforms to a point where they have become urgent and complicated on the one hand, while on the other the Bank's possible influence in seeing that they are effectively tackled has become diluted. Pakistan's experience is no different. To quote Guhan again on Bank loans to Pakistan railways, "implementation was not satisfactory in some of the earlier loans, operational and financial problems have been of the same kind as in India, only perhaps worse". A review carried out after the 11th railway project in Pakistan noted that "the borrower did little or nothing of what the Bank asked, and yet rather than ask why, the Bank simply repeated the same conditionality, adding more specifics and more targets".

The Bank has been largely instrumental in stimulating India's industrial expansion, which is well illustrated by what it did in fertiliser development in India. The Bank's advice was, however, not always complied with by India, though on a few occasions with good justification. The implementation problems in the fertiliser industry stemmed from "India's insistence on maximising domestic supplies and engineering services", which was not strictly in accordance with the Bank's preferences. Yet the Bank was frank enough in conceding that "this strategy of learning to cope with a multitude of operational as well as design problems led to the formation of a highly skilled cadre of technical and operational staff which provides the basis for a rapid expansion of the subsector and in turn has created numerous opportunities to use domestic capabilities". But the Bank's advice on the choice of technology, which was flouted by the Indian authorities, could have resulted in large savings. The Bank, of course, did not proceed with the loan. The Indian government nevertheless proceeded with the project (Thal Vanshet) with a technology it chose against the advice of the Bank by obtaining equipment from Snamprogetti. The technology chosen on the ground of standardisation "resulted in high cost contractual arrangmeents for process know-how and equipment in Indian fertiliser projects". The lender's advice thus was spurned at a heavy cost.

Contrary to the prevailing view that the Bank as a lender pushes its policy advice down the throats of borrowers, the reality is often the opposite, as the Guhan study has convincingly demonstrated. The reasons for this are obvious. First, the lending institution is always prone to be soft for fear of jeopardising achievement of its lending targets. The prospects of promotion and other rewards for the staff of the Bank are closely linked to how much they fulfil their lending targets. If India shies away from the new loan, the careers of the staff will be on the block. This lends credence to the remark of another Indian economist, Ashok Desai, a policy-maker who was closely involved in aid negotiations during 1992-93, that the relationship between the government and donors during aid negotiation are "cozy to the point of incest – it is not so often that the government gets bought up by the donors; it is more often the other way around". The second reason is dramatised in the famous Keynesian aphorism: 'if the borrower is large, it is the lender who should worry; in the reverse case it is the borrower's turn to worry'. India, in the South Asia region, is the single largest borrower and average loan size has been also larger than the average for all borrowers from the Bank group. How could then the Bank have exercised 'the exit' option – to discontinue lending, pending the demonstration of serious intent for reforms – except at its own peril? The Bank did it only exceptionally. In fact it terminated its loan to NABARD and NTPC in India and some projects in Pakistan and Bangladesh as well. But it was done as a last resort and "later rather than sooner" as Guhan puts it.

A more fundamental question can be raised whether the World Bank's advice or for that matter any lending institution's advice to borrowing countries always tends to be pernicious and petrifying. The Bank often enters into covenants with the borrowers which relate to audit, staffing, institutional matters and most importantly to revenue, imposition or revision of rates and tariffs in energy, transport and irrigation, loan recoveries, etc, which are used to influence, in Guhan's words, "sectorwide or economy-wide reforms". Those who are deeply concerned with efficient and time-bound implementation of Bank-financed projects would have liked these covenants to be honoured by the borrowers, irrespective of whether they had been designed by the Bank. However, the compliance record of the borrowing countries is dismal. Covenants relating to audit and staffing have not been adequately fulfilled, or on schedule. The same holds true of other important covenants bearing on policy reforms. One should therefore ask whether the borrowing countries complying with the Bank's advice would not have been economically better off without being politically worse off.

Much of the misperception and misunderstanding about the Bank's policy advice has to be sugarely attributed to the secretiveness of the governments of the borrowing countries. If the documents of the Bank embodying analysis of the policy advice were given wide public exposure, the media, the academia and the people at large would have been more persuaded to readily accept the advice. Guhan pertinently points out that "Bank studies more often get leaked than published, with the consequence that the Bank tends to be characterised as an agent of external pressure rather than as a partner in development. In good measure, borrower governments are responsible for creating a conspiratorial ambience around the policy dialogue between them and the Bank; in doing so they have only added to their own problems in securing understanding and support in the public domain for reforms."

In writing this delectable and analytical report supported by an array of facts, Guhan has rendered a signal service in educating many intellectuals in his country who are fixated more on fantasies than facts, ideologies than ideas and rhetoric than reason. Many who know Guhan's sardonic wit, vividly remember his tongue-in-cheek remark to an influential senior official of the World Bank who was pontificating on what India should do in the mid-1960s, "large as you are Peter, you are not a country". With this publication, he is almost saying in the same mocking tone to intellectuals in the borrowing countries, 'patriotic as you are, you are all petty-foggers'.

Flawed Vision of Democracy

Harsh Sethi

Democracy and Authoritarianism in South Asia: A Comparative and Historical Perspective by Ayesha Jalal; Cambridge University Press, 1995; pp xiii+295, Rs 385.

FOR a region that shares a common civilisational and institutional heritage, the political trajectories set into motion by the Partition never cease to amaze. Why or rather how is it that over the last five decades, India has managed to survive as a democracy, albeit a somewhat flawed one, while our western neighbour Pakistan slid into a quagmire of military authoritarianism for most of its history. Even Bangladesh, a rare case of a new nation that came into being following a bloody war, could not maintain a democratic facade for long. A succession of military coups pushed our eastern neighbour out of the democratic fold, such that even now the presence of an elected regime inspires little confidence about the stability of a democratic order.

In the monograph under review Ayesha Jalal, best known for her controversial biography of Jinnah, and the subsequent *The State of Martial Rule* (CUP, 1990) attempts to explain how a common British colonial legacy led to apparently contrasting patterns of political development – democracy in India and military authoritarianism in Pakistan and Bangladesh. She shows how, "despite differences in form, central political authority in each state came to confront broadly comparable threats from regional and linguistic dissidence, religious and sectarian strife as well as class and caste conflicts. By comparing and contrasting state structures and political processes, she evaluates and redefines democracy, citizenship, sovereignty and the nation-state, arguing for a more decentralised governmental structure better able to arbitrate between ethnic and regional movements."

The argument, as it develops in the book, operates on two planes. The first relates to establishing the unity of South Asia as an analytic entity, even if divided into different states. In doing so, Jalal confronts both the rulers and the ideologues on either side of the border who insist on 1947 as a decisive rupture and stress the ideology of difference. Nowhere is this stronger than in Pakistan where the construction of India as the 'demonic other' seems central to its existence as a nation. This effort at marking out points of difference is often taken to ridiculous levels. For instance, history textbooks in Pakistan would have us believe that the struggle for Pakistan began in 742 AD with the arrival of Islam in the subcontinent and the conquest of Sindh by Mohammed Bin Qasim. Visitors to the contemporary sections in the National Museums in Karachi and Lahore would be surprised at the absence of any photographs or reference to Gandhi, Nehru or Azad. The geography textbooks refer to the Indian ocean as the South Asian ocean. All through, at the official level, the effort is to deny any common heritage – in music, architecture, food or everyday life.

It is not that the situation on the Indian side is very much better. Barring citizen groups, unfortunately marginal in our polity, who continue to push for a people-to-people linkage and unity and the ideologues of Hindu nationalism, who in any case never accepted the legitimacy of Pakistan as a separate entity, most of our political and ideological elites too uncritically accept the boundary lines as markers of their analytical domains. No wonder, we have such a marked absence of serious comparative analysis. Jalal tries to go beyond both these sets of analysts – those who take the existence of separate nation states as given as also those who refuse to accept the legitimacy of the boundary lines – to tease out deeper structural similarities that bind together the different states of our region.

Much of what we confront today is traced by Jalal to the uncritical acceptance of the idea of the nation-state and the near wholesale copying of the Government of India Act of 1935. A system once designed by an alien colonial power to establish central authority over a large and disparate mass and territory was continued by the post-colonial states. India may have performed relatively better because it inherited the colonial state's apparatus, permitting it to consolidate its territory and maintain order and continuity. Pakistan, since it had to establish its dominance from scratch, was forced to rely on more authoritarian forms. What is noteworthy is that unlike traditional South Asian scholars and their preoccupation with political parties and formal democratic structures, Jalal seeks to foreground the role of the civil and military bureaucracies. For her, the inheritance by the Congress Party of the mantle of the anti-colonial struggle, the presence of different active political parties, regular multi-party elections at all levels, the constitutional separation of the political, administrative and judicial functions, the ideology of secularism, a free press, etc, is obviously insufficient to mark the contemporary political legacy in India as substantively different from that of its neighbours. She 'discovers' that "political and economic developments and the ideological responses to them are showing signs of convergence", bringing to the fore the shared authoritarian streak, most marked in the handling of regional, ethnic and linguistic differences, what to speak of the problems faced by the popular classes. Clearly, or so argues Jalal, both the overarching ideology and structures of governance provide little space for substantive autonomy and democracy.

Central to Jalal's argument is her understanding of the legitimacy of the nation-state and the ideology of sovereignty. She sees both as major villains in pushing to the fore a hegemonic notion of inclusionary nationalism and the insistence on a monolithic national identity. It is as if the need to counter the colonial legacy of divide and rule pushed the rulers of the independent states into forgetting their rich legacy of working out creative political arrangements based on layers of sovereignty. This, along with the reliance on the colonial apparatus, the centralised civil and military bureaucracies, is what explains the relative inability to handle local and regional, ethnic and religious diversities.

Even one sympathetic to the broad political project of a common and peaceful South Asia (even if divided into different states) and deeply suspicious of the democratic and secular credentials of the Indian state, would find Jalal's sweeping assertions somewhat problematic. It is one thing to argue that the mere presence of regular multi-party elections at all levels is an insufficient indicator of substantive democracy. All of us are witness to the process through which all our political parties, irrespective of their formal ideologies, have steadily converted themselves into essentially electoral machines, more concerned about the mechanics of coming to power, rather than working towards meaningful governance. All our political scientists, from Rajni Kothari to Atul Kohli, have traced the decline of the political parties, the erosion of internal democracy, the decline in memberships, and the consequent inability to resolve conflicts at different levels. We have also witnessed the steady enmeshing of the bureaucracy and judiciary, even the security forces, into the sphere of party politics. But to equate the Indian political scene with either Pakistan marked by an overwhelming dominance of the military and bureaucracy, or Bangladesh is surely stretching the point.

True that Jalal does see the Indian political experiment till 1971 as relatively more successful. Be it the integration of the princely states or the later accommodation of linguistic assertions, for Jalal what is often missed out is the decisive role of the IAS and IPS in ensuring the centre's writ in many areas where the Congress machinery was unable to deliver the goods. Even if we give greater importance to the crushing of the communist movement in Andhra, or the fairly brutal putting down of the insurgencies in the north-east, few would seriously contest that unlike Pakistan the Indian security force, even when increasingly and disturbingly brought into the ambit of governance, continues to operate well within the parameters set up by elected civil authority. And so is it with the bureaucracy. Even in the halcyon days of Indira Gandhi, the prime minister's secretariat never became an alternative centre of institutional power. Jalal still has to realise that howsoever critical one may be about the functioning of political parties and elections in India both institutions remain popular and provide a bedrock of legitimacy to the Indian state without which we would be unable to survive. It bears repetition that the Emergency of 1975-77 was short-lived and the regime had to seek validation through the polls. And unlike Saddam Hussain's Iraq of 1995, Indira Gandhi's regime was voted out.

It is this flawed understanding of the role of non-elected civil institutions, the actual role of political parties and elections, and the increasing rootedness of a modern political culture that leads Jalal into postulating a unity in authoritarianism in South Asia – one in which the region increasingly approximates Pakistan. Thus, she does not explore the question why political parties took root in India to a much greater extent than in Pakistan. The ability of the Pakistani governing elites to suborn and buy out or crush political leaders and formations only begs the question. It provides no answers. Similarly, she provides no analysis of the absence of a modern political culture in Bangladesh – a country marked by a plethora of political parties, but none willing to play by any rules of the game.

Equally problematic is her thesis that all through the sub continent, civil society has been short changed by the state structures. One is amazed at her falling prey to the currently fashionable concepts of community, ethnicity and the people in a celebration of the ideology of difference, a trait shared by many ideologues of resistance struggles. Unfortunately, these tendencies, while essential as a corrective to hegemonic and monolithic nationalism, are often marked by non-democratic features. But, more importantly, they provide no clues on how to evolve norms of good governance. Without falling into the obverse trap of the immortality and inviolability of the nation-state, providing an inherent right to legitimacy to any group claiming the status of victimhood may well lead to a balkanisation of the subcontinent, such that the recent past may well become the proximate future.

The nation-state, both as an administrative arrangement and as an analytical entity, too needs to be appraised afresh, more so in these days of globalisation and liberalisation. If so far the Indian state has not gone the way of some African and Latin American states, it is at least partly because our state structures have been able to provide us with a measure of autonomy to deal with diverse global forces. And it is their current weakness as also their eroding legitimacy that pose the greatest threat of being runover today.

In fact her inability to negotiate the fluid boundaries between autonomy and independence, the working out of federal arrangements between constituent units of a single entity and the tendency of smaller local and regional entities to seek out their autonomous and independent paths is what generates suspicion about Ayesha Jalal's basic political project. Her plea for autonomy and decentralisation bordering on independence (though it must be mentioned that nowhere does she actually state this in so many words) can in the present global context easily lead to the subcontinent fragmenting into a large number of small and weak states, without the needed ability to counter the designs of the stronger global players. Worse, it can as easily lead to each smaller entity emerging as a despotic one.

Let me end with a prescient quote from Sadaat Hasan Manto that Ayesha Jalal uses at the start of her concluding chapter:

> As to where Pakistan was located, the inmates know nothing... the mad and the partially mad were unable to decide whether they were in India or Pakistan... It was also possible that the entire subcontinent of India might become Pakistan. And who would say if both India and Pakistan might not entirely vanish from the map of the world one day (pp 247, excerpts from 'Toba Tek Singh').

What was discerned by the inmates of a lunatic asylum may well come to pass. But one wonders whether this is the future that Jalal would wish upon the people of the region.

'Captains of the Sands'

Metropolitan Hegemony in Mining in Tiruvitamkur, 1900-50

K T Ram Mohan

During the first half of the 20th century the predominant mining activity in Keralam (Kerala) was related to mineral beach sands containing monazite, ilmenite and other 'rare earths'. The mineral belt was located in the princely state of Tiruvitamkur (Travancore) and industry and trade in minerals was under the control of metropolitan capital. This paper examines the nature and working of the metropolitan hegemony in mining in the region.

MINING being one of the 'classic' dimensions of economic colonialism, the neglect of this aspect in the existing body of literature on the political-economic history of Keralam (Kerala) is rather surprising. The present study attempts to bridge – even if only partially – this important gap During the first half of the 20th century, the predominant mining activity in the region was related to mineral beach sands containing monazite, ilmenite and other 'rare earths'. This mineral belt was located in the then princely state of Tiruvitamkur (Travancore), the geo-political unit of the present study. Throughout the period of reference, industry and trade in minerals in Tiruvitamkur were under the control of metropolitan capital. Thus, in a wider sense, the unit of study is the larger world system. Imperative it is to emphasise that the categories, 'periphery', 'metropolis', and 'world system' are employed in the present study particularly to illuminate the concrete conditions of the global political-economic relations.[1]

This paper examines the nature and working of the metropolitan hegemony in mining in Tiruvitamkur. To facilitate this, the following themes are pursued: (a) the control exercised by the British Crown through its local functionaries in defining the political economy of mining, (b) the nature of organisation of work in the mineral sands industry, particularly the aspect of child labour,(c) the relations among the various 'national' fractions of the metropolitan capital, (d) the use of national identities by the metropolitan companies to accelerate their processes of accumulation, (e) the conditions influencing the emergence and rapid disppearance of a narrow fraction of Tiruvitamkur capitalists, and the continuance of non-Tiruvitamkur South Indian capital, and (f) the relations between the local government and the various fractions of mining capital – metropolitan, South Indian and local.

The analysis comprises the following sections: Section I presents an overview of the mining activity in Keralam until the turn of the 20th century; Section II discusses the monazite boom in the opening decades of the 20th century, with its attendant implications for rivalry among the metropolitan mining companies; Sections III and IV respectively examine the nature of the work processes and the position of local capitalists in the industry; Section V analyses the rise of ilmenite as a major element in industry and trade in the 1930s; Section VI examines the nature of relations between the local government and metropolitan mining companies; and, the final section is an epilogue on the post-1950 situation.

I
The Early Years

Observers in the early 19th century have detailed the existence of iron ore smelting furnaces ('ootala') in many villages of the Malabar coast.[2] Apart from ore for smelting being locally obtained, the market for iron and its products was also mostly local. Even though some of the furnaces in central Malabar survived through the early 20th century, in general, the artisanal forms of production were either completely lost or truncated during the latter half of the 19th century. On the condition of an earlier centre of iron production the Census Commissioner of Tiruvitamkur observed in 1931:

> Marayur [in southern Tiruvitamkur] where the smelting of iron ore was carried on was in those days a prosperous village of blacksmiths. They made all the agricultural implements and weapons required for the local people out of the steel prepared in indigenous foundries. Even now the blacksmiths are there, but they are making the implements out of imported steel.[3]

The supersession/incorporation of the local artisanal mining economy occurred in the wider context of the 'free' trade phase of imperialism as manifested in the commercialisation of the Keralam economy and the effective integration of the region into the world market. As external trade expanded multifold, the local economic processes and relations were increasingly subordinated to the global processes and relations. The increased industrial activity in the region to meet the needs of the metropolis had to be supported by large-scale import of food. Further, while local needs were increasingly met by imported industrial products, the metropolis began to utilise mineral resources of the region to meet its own industrial needs. Against this background, a new economy of mining under the aegis of the metropolis began to emerge from the mid-19th century.

The metropolitan companies initially looked for gold. Prospecting for gold began in Peerumed hills in Tiruvitamkur around the 1850s.[4] The Wayanad region adjoining Malabar was a centre of relatively more intense activity.[5] The Southern Indian Alpha Gold Mining Company formed in 1874 and the Wayanad Prospecting Company established about two years later were among the earliest metropolitan companies to look for gold in Wayanad. In the early 1880s, a host of companies, including the Wayanad Gold Mining Company, Kaiser-i-Hind Gold Company and the Wayanad Consols was floated. However, gold mining on Malabar coast in the post-1850 period was essentially a creation of speculation, and it soon turned out to be a 'lost enterprise'. Many of the gold mining companies were promoted by aggressive fortune-hunters, most of whom were planters out to make 'quick money'. Only a few of them had previous experience in gold mining. Mining companies were floated without sufficient prospecting. In fact, some of the pioneering companies like the Temple Block Wayanad Mining Company registered in 1881 were

'outright devices to swindle the public'. Ironically, the shares of some of these companies were quoted at a premium of 100 per cent to 200 per cent in London,[6] while there was little activity at their mining fields in Wayanad for want of qualified technicians and lack of infrastructure. From mid-1880s reports started reaching London that in southern India commercially viable quantities of gold were available only in the auciferous rocks of Kolar.[7] With this the gold mania subsided. The share prices fell heavily and companies were liquidated in quick succession. Thus, most of the gold prospectors and mining companies disappeared from Wayanad by the end of the 19th century. With the end of the 'Wayanad gold rush', the centre of gravity of mining shifted to Tiruvitamkur.

In Tiruvitamkur, graphite, and to a lesser extent, mica, were among the first minerals to be brought under systematic mining. In 1894 the British-owned Parry and Company obtained a licence to prospect graphite at Vellanad, near Tiruvanantapuram.[8] The company also secured a prospecting licence for mica at Iraniel in Nanchilnadu.[9] The plots prospected were rather small – three to five acres – but, importantly, prospecting licences either contained or implied preferential right to a mining concession.[10]

In 1900 Morgan Crucible Company of London obtained the first major mining concession in the state. This covered about 50 acres of graphite land at Nedumangad and Neyyattinkara, near Tiruvanantapuram.[11] A remarkable property of graphite is that it is immune to temperature up to 3000°C and also to most acids and reagents. Hence it was widely used to make crucibles to melt non-ferrous metals. It was also used for foundry facings, and later, for making electrodes used in electric furnaces. The Morgan Crucible Company's works in London were situated on the banks of the Thames. There the imported graphite was turned into various industrial products and shipped to different parts of the world. By 1906 the Morgan Crucible Company was the only firm mining graphite in Tiruvitamkur. Moreover, as an official of the government of Tiruvitamkur informed the Resident, it was 'the only mineral worked in the state'. The company worked two mines, together employing 477 workers.[12] Steam alone or in conjunction with oil, was used as motive power.[13] The company had also obtained permission to mine mica and steatite; but these were not worked. However, as the author of the *Travancore State Manual* observed in 1940,

> [a]ll these minerals pale into insignificance in comparison with some of the so-called rare minerals in which Tiruvitamkur is rich; and of one or two of them she is holding a practical monopoly in the mineral industry of the whole world.[14]

II
Monazite Boom and Inter-Imperial Rivalry

Significant expansion in mining in Tiruvitamkur commenced from 1909 when the yellow sands of the coast from Kulachal in Nanchilnadu to Chirayinkeezhu in the north of Tiruvanantapuram were discovered to contain rich deposits of monazite. Not long after, it was discovered that the mineral belt extended to areas even beyond Kollam. Further, the black sands on the northern stretch were found to be particularly rich in ilmenite. Mineral sand deposits in the state were later estimated at 10 million tons of monazite and over 20 million tons of ilmenite. Significant deposits of rutile and zircon too were noticed. Very few countries could claim comparable deposits of mineral sands.[15]

In the early decades of the 20th century, monazite was used mainly in the production of gas mantles for lighting. Gas mantles were made up of 99 per cent thorium dioxide and 1 per cent cerium dioxide. Both these chemicals were derived from monazite. Germany and England were the major centres of gas mantle production. The steep rise in demand for mantles induced the metropolitan companies to engage in a worldwide scramble for monazite. The first list of applicants for prospecting/mining monazite in Tiruvitamkur included metropolitan companies like the London Cosmopolitan Mining Company, Forbes, Campbell and Company, Hopkin and Williams Company, Branley and Company, and the two Tiruvitamkur-based metropolitan companies – Cameron and Company, and Chisholm and Company. In April 1909, Schomberg, the accredited agent of the London Cosmopolitan Mining Company arrived in Tiruvitamkur to assess the available deposits and negotiate with the government. Subsequently, the London Cosmopolitan Mining Company was provisionally allowed to prospect and remove up to 20 tons. Meanwhile C H Tipper, the officiating superintendent of India Museum, investigated the deposit and recommended a royalty of 7.5 per cent on fob value.[16]

The rivalry between the monazite contenders surfaced into the open even before the first mining concession was granted. The Hopkin and Williams Company, London, alerted the government of India that German interests were involved in the London Cosmopolitan Mining Company and alleged that the mineral sand exported by the company from Tiruvitamkur had actually been diverted to Hamburg, Germany. It was further contended that this could be detrimental to the gas mantle industry in England. Meanwhile, Hopkin and Williams also sought a 20-year monopoly, with an undertaking to export a specified quantity of monazite every year paying a higher royalty of 10 per cent, as also a royalty deposit.[17] The department of commerce and industry of the government of India felt that the grant of monopoly should be avoided and that the state would benefit more by encouraging rivalry. The allegation of German interests in the London Cosmopolitan Mining Company lost its sting following the company's reassurance to the government that it was chiefly British, with only a nominal shareholding by the Germans. Above all, by virtue of the prospecting licence, the London Cosmopolitan Mining Company had secured preferential right to mining. Thus, a lease deed with the London Cosmopolitan Mining Company was signed on May 6, 1911.

The *Census of India (Travancore) 1911* reports employment of 17 men and 11 women at the London Cosmopolitan Mining Company's works in Tiruvitamkur. The small workforce at this stage is suggestive of the company's activities being limited to export of sand. In 1913, in association with General Electric Company, it floated a subsidiary called the Travancore Minerals Company.[18] The separation of the mineral by washing and magnetic process became possible with the technical support of the General Electric Company. The mining

TABLE 1: EMPLOYMENT OF CHILDREN IN MINERAL SANDS PROCESSING, 1920-36
(Selected Years)

Year	No of Workers Employed		No of Child Workers (16 Years and Less)		Percentage of Child Workers to Total Workers	
	A	B	A	B	A	B
1920-21	152	284	63	186	41.45	65.49
1927-28	155	95	80	37	51.61	38.95
1935-36	1042	na	532	na	51.06	na

Notes: Firm A = Travancore Minerals Company.
Firm B = Hopkin and Williams Company.

Source: Government of Travancore, *Statistics of Travancore* (Tiruvanantapuram: Superintendent, Government Press) (respective years).

concession held by the London Cosmopolitan Mining Company was transferred to the new company in return for majority shareholding. Simultaneously, the Travancore Minerals Company also procured a monopoly licence of red garnet sand in the state. Between the years 1916-17 and 1920-21 the company exported around 3,667 tons of monazite in addition to small quantities of zircon; the latter was used as binding material in refractory manufacturing. The government of Tiruvitamkur received a total royalty of British Rupees [hereafter, Bh Rs] 2.85 lakh.[19] Garnet sand was not worked.

With the outbreak of the first world war, Hopkin and Williams intensified pressure on the government of Tiruvitamkur to oust the Travancore Minerals Company. Again it was represented to the British government that both the London Cosmopolitan Mining Company and the Travancore Minerals Company were 'enemy firms'. In the new political situation, Britain did not wish to allow the company to function under 'benefit of doubt'. The London Cosmopolitan Mining Company was asked to reconstitute itself as a fully British company.[20] In the process, Hopkin and Williams managed a monazite concession in Tiruvitamkur.

The Hopkin and Williams' concession area was 6 square miles and the period of lease extended to 20 years. The royalty was fixed at Bh Rs 45 per ton of monazite sand exported. In September 1919 a lease deed was signed. It provided for mining of three minerals – monazite, zircon and ilmenite. On zircon and ilmenite, royalty rates of Bh Rs 10 and Bh Re 1 respectively were fixed.[21] There was no insistence on minimum export quantity or minimum royalty; royalty was not linked to the price of the mineral which was steadily appreciating; and, royalty deposit was not demanded. These omissions, as shall be indicated subsequently, proved very costly to the local government. Between the years 1916-17 and 1921-22, Hopkin and Williams shipped 2,673 tons of monazite. The royalty of Bh Rs 1.66 lakh realised by the government of Tiruvitamkur[22] during this period was indeed not a small sum in absolute terms, but had little relation to the sales revenue earned by the company.

Following the spread of electricity in the post-war period, the demand for gas mantles dropped. Consequently, monazite exports from Tiruvitamkur retarded and even ceased till it was discovered that the mineral could be used in the production of atomic weapons. However, a rising demand for zircon and ilmenite, kept the sand mines on the Tiruvitamkur coast flourishing during the intervening period.

III
Workers and Work Processes

The work in mineral sands processing involved three major operations: earthwork, separation and transport. Earthwork was done using simple digging tools like shovels. The sand was then put in gunny bags and carried as headload by workers to the site of separation (factory). At Manavalakurichi in Nanchilnadu, separation of mineral sand was done manually by panning in water. The separated sand was packed again and transported by bullock carts to Kulachal port, about 5 km away. From the beach site, sand bags were loaded in 'vallam' (country craft) and carried to ships anchored offshore. Monsoons were a lean season for the mineral sands industry on account of shipping difficulties.[23]

As in the case of traditional industries in the state, workers in mineral sands industry were drawn from lower castes and communities. *The Census of India (Travancore) 1921* reported that a majority of the workers engaged in monazite mining industry were 'Indian Christians'. This composed of two socially and economically depressed groups: Roman Catholic fisherfolk from coastal areas and nadar landless peasants and workers from the immediate interior. Both these groups were converts from lower Hindu castes. Roman Catholics were traditionally engaged in marine fishing and nadarmar in paddy cultivation and toddy tapping. Therefore, their engagement in mining represented the diversion of a section of the people from food production for local needs to industrial production for the needs of the metropolis. While earthwork and land transport were mostly done by the nadarmar, transportation of sandbags from shore to ship in vallam was done by the fisherfolk. Ezhavar, Vellalar, Nayanmar, and Muslimgal were also involved in the industry, but to a much lesser extent.

None of the major operations involved, namely, earthwork, transportation by land or water, were unfamiliar to the local people. Even in the case of separation of the mineral, the region had a 'ponnarippu' (panning gold sands in water) tradition. The 'unskilled' nature of work and segmentation of the labour processes helped the metropolitan companies to organise production on a system of subcontracting. Earthwork and transportation were contracted out.[24] The factory was merely the site of separation of sand, and its packing in gunny bags for exports.

The incidence of child labour was pronounced in the industry. This fact acquires a particularly serious dimension, given the radioactive nature of the work process. In 1921, of the 235 workers employed in monazite sand factories, 95 were children under 14 years (constituting 40.43 per cent of the total employment). No adult females were employed, but among children 28 were girls. By 1931, with the increase in the number of workers to 372 the number of children rose to 116 (31.18 per cent). Another 25 workers were aged between 14 and 16.[25] Thus, child workers aged 16 years and less formed 37.9 per cent of the total factory workforce.

Table 1 presents a profile of child employment in the two metropolitan mineral sands processing firms in Tiruvitamkur. As the table reveals, even in the mid-1930s about half the workforce was children.

In the case of firm B, there is a sudden drop in total employment as well as in child employment between the years 1920-21 and 1927-28. However, in the absence of information on the quantity of output and the methods and techniques of production it is difficult to establish whether this was the outcome of a scaling down of production or the result of an increasing shift to labour contracting and/or substitution of the manual method of separation by electro-mechanical means.

With the development of ilmenite mining the scale of child labour in mineral sands processing appears to have registered a decline. However, a little over one-fifth o

TABLE 2: COMPARATIVE WAGES: MINERAL SANDS AND OTHER INDUSTRIES, 1931

Name of the Industry/Activity	(Daily Wages in Chukram)			
	Adults		Children	
	Men	Women	Boys	Girls
Monazite sand	10.5	na	6.5	na
Rubber (cultivation)	10.5	8.75	7	7
Tea	12.5	9	7	7
Tile	13	9	9	na
Oil milling	15.5	na	na	na
Paper	19	18 5	7	5.5
Coir mats and mattings	21	12	10.5	9.5

Note: na = not available.

Source: Government of Travancore, *Census of India (Travancore) 1931*, Report (Tiruvanantapuram Superintendent, Government Press), Appendix IV, 'Economic Condition of the People' p 498.

the ilmenite workers were children aged 16 years and less. In 1941, the two ilmenite working firms together employed 3,007 workers, including 68 women. Of the 604 child workers, 145 were under 14 years and 10 of them were girls.[26]

The wages in mineral sand factories were lower than most other industries in the state, with the possible exception of the cashewnut processing industry. While in 1931, an adult male worker in the coir industry received a daily wage of 21 'chukram' [Bh Re 1 = 28.5 chukram] and a male child-worker received 10.5 chukram, the corresponding rates in monazite industry were 10.5 and 6.5 chukram respectively, i e, an adult male worker in the monazite industry received just as much wage as a child worker in the coir industry. Table 2 presents comparative wages in mineral sands and other industries in 1931.

Table 2 is clearly indicative of the relatively low level of wages in the monazite mining industry, more so when compared to the wages in the coir mats and mattings industry, which was the major source of manufacturing employment in the state. However, it is difficult to make a firm inference on the comparative levels of exploitation from this data since it does not consider specificities of the industries, such as skill requirements, working hours, nature of work and age-composition of workers. The high price of the mineral and the monopolistic nature of the monazite industry, viewed against the low level of wages, however, point to an extremely skewed distribution of income within the industry. It is also important to note that concerted trade union activity in the mineral sands industry developed almost two decades after its beginning in coir and cashewnut processing industries.

IV
Peripheral Capitalists

As early as in 1909 the *Malayala Manorama*, a local language newspaper, had made the following prophetic observatin:

> As soon as mines are discovered, European companies flock there like vultures descending on cadavers. Considering the nature of relationship of our government with the British government, entry cannot be denied to European companies. Still it should be possible to frame a legislation to ensure that at least half the shareholding of the mining companies working in the state is in the hands of local people. Otherwise all those troubles that have fallen on the people of Mysore with regard to the Kolar Gold Fields would recur here too.[27]

Given the political order within which princely states like Tiruvitamkur and Musore were located, it was obvious that a legislation as desired by the *Malayala Manorama* could not easily be framed. In addition, factors such as the biases of the British Resident in granting mining concessions, the monopolistic control of the metropolis on the technology for separation of the mineral, and the metropolitan nature of the market made it difficult for local capitalists to extend their roots in the mining industry. The best part of the mineral deposits were controlled by the metropolitan companies. In contrast, concession areas of local capitalists were small, the lease period was relatively shorter and the royalty rates higher. Consequently, local capitalists could not take advantage of either the economies of scale in production or of bulk shipping, and therefore had little cushioning against possible losses.

In fact, local capitalists being able to obtain mining concessions was a rarity. As for those who obtained permission, several could not go beyond the phase of prospecting. The financial resources of local capitalists could in no way match those of metropolitan capitalists. Given the lack of development of a corporate money market, raising additional finances was difficult for local capitalists. Their lack of access to both the metropolitan technology and market further compounded their disadvantages. A few local capitalists managed to survive for sometime by supplying the mineral at rates lower than the normal to the metropolitan companies engaged in direct exports. With the exception of ilmenite, where a Tamil firm, F X Pereira and Sons, came to be firmly established, mining in Tiruvitamkur throughout the period under reference was distinctly a metropolitan enterprise.[28]

It was from the early 1920s that Tiruvitamkur capitalists began to express interest in mining. Most of the requests for prospecting/mining were for monazite. Obviously, they were encouraged by the success of the two metropolitan mining companies. Access to higher levels in the administration seems to have been an important factor in gaining licences and concessions. Thus, many of the early applicants from Tiruvitamkur were government officials, either in service or retired, and professionals. Among the earliest local concessionaires was E J Philipose, an advocate in the Tiruvitamkur High Court. However, probably on account of shortage of capital, he could not start working the concession area.[29] The first list of the local applicants also included E J John, E John Kuruvila and K Chandy jointly;[30] K C Eapen,[31] E Masillamani[32] and P K Kesava Pillay.[33] The potential capitalists thus hailed mainly from three communities: Syrian Christianikal, Nayanmar and Nadar Christianikal.

Mining, of monazite in particular, was a matter of direct interest to the British Paramountcy. The major consideration throughout was one of ensuring British monopoly. In this context, the local government could do very little to promote local capitalists even if it wished to do so. K C Eapen's application for a monazite mining lease in 1921 was rejected on the ground that there was a lull in the market and hence Hopkin and Williams had raised complaints regarding the grant of new licences.[34] E J John's request for mining mica in his private land made during the same year met with a harsher fate: the land was acquired by the Government of Tiruvitamkur and handed over to the British-owned Madras Mica Company.[35] Later, John applied jointly with P K Kesava Pillay for a mica concession at Punalur. Again the application was rejected and the concession was once again granted to the Madras Mica Company.[36]

In September 1920 E J Philipose, advocate, and Joseph Andrew, a merchant of Tiruvanantapuram, applied for a mining concession. The applicants appealed to the government for a sympathetic consideration of the interests of local people. They pointed out:

> There are two companies working in [sic] monazite in Tiruvitamkur. These two companies are entirely foreign companies and are worked exclusively with foreign capital. Natives of Tiruvitamkur are not allowed to take shares in them nor are they allowed to participate in the profits thereof. Natives of the soil should therefore, we beg to submit, be given every facility and encouragement to work up [sic] this mineral.[37]

Permission was granted, but the royalty was fixed at one-third higher than that of the metropolitan mining companies. The lease area was about 212 acres at Karunagappally, adjoining the Hopkin and Williams' concession area. But subsequently the concessionaires surrendered their licences. Inevitable this was, given their lack of access to the metropolitan market and the financial constraints.

The joint application of E John Kuruvila, E J John and K Chandy of July 1921 was for 300 acres of monazite tract at Kollam-Karunagappally. Permission was granted, but again, the terms clamped were harsher when compared to those applicable to the metropolitan companies. Royalty was fixed at Bh Rs 60 per ton – against Bh Rs 45 in the case of metropolitan companies. Additionally, the government also insisted on a minimum turnover of 750 tons per year and a royalty deposit of Bh Rs 5,000.[38] John

Kuruvila requested a reduction of royalty and withdrawal of provisions relating to minimum turnover and royalty deposit. He observed:

> [Such stringent conditions] would at present moment simply drive us to extreme measures and the government would be unconsciously driving us to play into the hands of foreign capitalists.[39]

In 1922, John Kuruvila further requested the government to grant his syndicate an additional year to pay the royalty deposit and to sign the contract. Eventually, the operation did start but could not sustain itself for long as there was a slump in demand following the decline of the gas mantle industry in the metropolis.

V
Rise of Ilmenite

Ilmenite, the black mineral sand, was a component of black paint. In the 1930s demand for the mineral shot up with the discovery of its use in the manufacture of titanium dioxide, a white pigment having versatile industrial uses. As early as 1919 the Hopkin and Williams Company had obtained a concession for mining ilmenite in Tiruvitamkur. Therefore, the company was well prepared to take advantage when the market for ilmenite boomed.

From the early 1930s applications for ilmenite began to increase steadily. In June 1931 E Masillamani, formerly the state geologist, applied for 958 acres to work ilmenite, zircon and monazite for 20 years.[40] The Trade Commissioner at the India House, London, cautioned the government of Tiruvitamkur that Masillamani may be representing certain American interests keen to secure ilmenite monopoly in Tiruvitamkur.[41] Masillamani's request was placed before the Economic Development Board of the government of Tiruvitamkur. The board recommended that a small area of about 50 acres may be granted after fixing appropriate amounts of minimum royalty and royalty deposit. Masillamani sought reduction of minimum royalty to the rate applicable to foreign companies.[42] This was granted but his appeal for exemption from payment of royalty deposit was rejected.

Two of the new applicants were Tamil capitalists. In 1931, J L Pimanda, a Tootukudi merchant, carrying on mineral and allied business in Colombo, applied for a licence to work ilmenite, zircon and monazite on 1,302 acres.[43] During the same year, F X Pereira and Sons, also from Tootukudi, applied for licence to work ilmenite on 49.56 acres of land for 10 years and also sought prospecting licence for zircon and monazite.[44] The response to these applications reveals interesting aspects of the relationship between local capitalists and immigrant south Indian capitalists and also, the balancing role of the state. The Economic Development Board, were local capitalists were well represented, rejected both the applications. Its resolution stated:

> The board considers that the natural resources of the country should be conserved for the development by the sons of the soil, and does not, therefore recommend the grant of mining licences to Messrs. F X Pereira and Sons and J L Pimanda.[45]

The board recommended that a small area may be allotted to Masillamani, and "reserve the balance to be allotted to other Tiruvitamkurkar who may apply for mining licence hereafter".[46]

Overlooking the resolution adopted by the Economic Development Board, the government of Tiruvitamkur decided to sanction licences to both the applicants from the Tamil country. The areas leased out were however not very large. J L Pimanda was allowed less than 50 acres against 1,302 acres he had requested. F X Pereira and Sons was allowed 41.76 acres for 10 years. The government justified the grant of concessions thus:

> The new applicants are all Indians whom it is the duty of government to encourage Another consideration is that by giving the leases, government will get more revenue in the shape of royalties.[47]

F X Pereira and Sons later rose to the position of the third important mining company in the state – next only to Travancore Minerals Company and Hopkin and Williams. It employed about 300 workers (all male). The success of this venture, in contrast with the failure of local capitalists is probably explained by its intimate relation with the Colombo market, which was a major *entrepot* centre of minerals trade to the metropolis. However, when compared with the two metropolitan companies, F X Pereira's scale of operations was minuscule. Between the years 1931-32 and 1935-36 the company exported just over 0.30 lakh tons of ilmenite. Corresponding figures for Travancore Minerals and Hopkin and Williams were 2.28 lakh tons and 1.15 lakh tons respectively.[48]

While, as a body, the local capitalists were opposed to immigrant Indian capitalists, it did not exclude the possibility of alliances at individual business levels. Masillamani of Tiruvitamkur and J L Pimanda of Colombo had been granted adjoining lands in Chavara, north of Kollam. They entered into an agreement under which Pimanda functioned as the proprietor and financier. Soon after P V Swaminathan, cashew industrialist, and C P Matthen, banker, entered this partnership. Accordingly, the firm of Malabar Minerals was formed in July 1936. After two years it was reconstituted as a private limited company.[49] The government of Tiruvitamkur however, refused to register the transfer of mining lease to the new company.[50] Behind the refusal perhaps lay the then Dewan's unsavoury relationship with C P Matthen.[51] Work was pushed by J L Pimanda for some time, but finance posed a problem. In 1939 Malabar Minerals was absorbed by the Associated Minerals Company, newly floated by the metropolitan capital.[52]

During the 1930s the metropolitan companies obtained new concessions, which included fresh lease of old territories as well as new leases. Royalty on ilmenite was fixed at Bh Re 0.75 per ton. Hopkin and Williams' lease was for 15 years. In spite of the fact that the lease was primarily for monazite, the company was able to export over 1.78 lakh tons of ilmenite during the period 1929-30 to 1936-37.[53] The Travancore Minerals Company had access to the ilmenite stretch, north of Kollam. It exported over 2.28 lakh tons of ilmenite between the years 1931-32 and 1935-36.[54] In 1935-36 the company's first works, using oil and electricity, employed 1,006 persons (including 524 children) daily. The second works employed 36 persons (including 8 children). It used oil-engines for motive power.[55]

The early 1930s saw the British-owned Travancore Minerals Company being acquired by the National Lead Company of the US. This caused panic in titanium products industry in England, the National Titanium Pigments Company, the major buyer of Tiruvitamkur ilmenite, in particular.[56] However, by the mid-1940s Britain partially re-established its stakes in ilmenite mining industry in Tiruvitamkur. In 1946 the British Titan Products Company moved into the state with its technology, and in collaboration with the local government set up the Travancore Titanium Products Company, to manufacture titanium dioxide from ilmenite. In 1949, the National Lead Company withdrew from Tiruvitamkur, selling off the Travancore Minerals Company to the government for a consideration of Rs 11 98 lakh. At that time the Travancore Minerals employed about 160 workers daily and produced 77,000 tons of ilemenite a year.[57]

VI
Uneasy Equations: Local State and Metropolitan Companies

The relationship between the government of Tiruvitamkur and the metropolitan mining companies was hardly smooth. Political

compulsions of the paramountcy framework coerced the local government to sanction all major concessions to the metropolitan companies, but it was an act that was grudgingly performed. However, not a single lease deed could be cancelled. The lease of red garnet sand, used in making abrasive paper, to the Travancore Minerals Company was an absolute sell-out. The company held a monopoly on collection and export of red garnet sand available anywhere in the state by virtue of the original licence held by the London Cosmopolitan Mining Company. The state geologist in his letter of March 1921 to the chief secretary, government of Tiruvitamkur, pointed out:

> [T]he London Cosmopolitan Mining Company are not making any use of the garnet sand although they hold a lease for collecting and exporting it, thus preventing others from making use of it. This appears to be an undesirable state of affairs. The company must either make use of the garnet or allow others to do so . [I request] the government to see whether the company cannot be induced either to make use of the garnet sand or to waive their right in respect of that mineral.[58]

Further, as indicated earlier, the core area of the monazite belt remained under the control of the metropolitan capital throughout the period under reference. Only a small part of it was actually worked, but it forestalled new entrants. This was a matter of concern to the local government which wanted to increase its revenues by admitting more companies into mining. In his report prepared in the mid-1930s, the geological assistant in the government of Tiruvitamkur department of industries noted:

> The present mining lease to Messrs Hopkin and Williams permits them to work in an area of 6 sq miles in a region which is so extensive as to comprise areas lying between Kanyakumari and Chirayinkeezhu river, excluding the beach, and in all these years they have not been able to work more than a few acres at Manavalakurichi. Thus the indefinite way in which the area in the existing lease has been demised, has stood in the way of other people entering that area, although there are deposits enough within it capable of being worked.[59]

However, in neither case the Tiruvitamkur government could do nothing to cancel the lease deed and allow new entrants. Royalties threw up another vexed question. As observed earlier, the monazite boom in the opening decades of the century was soon followed by the ilmenite boom in the 1930s. From the early 1940s, rutile, the mineral for manufacture of titanium metal, also came to be exported in significant quantities. On the whole except for a short spell of depression in the monazite market in the 1920s, mineral sands was a flourishing industry throughout the period under reference. However, the government could not benefit significantly from this buoyancy. In the mid-1930s, royalty collected from the three mining companies per year was just about Bh Rs 1.43 lakh, a tiny fraction of the revenue the companies reaped. Since the royalty rates were fixed in relation to quantity, the gains from price rise could not be derived by the local state. Nor could it, for that matter, unilaterally raise the royalty rates since these were fixed at par with those charged by the government of India.

The relations between the Tiruvitamkur government and the Hopkin and Williams Company were particularly friction-ridden. According to the lease deed signed in September 1919, the company was required to pay a minimum royalty on 500 tons of monazite sand every year, irrespective of quantity exported. However, under exceptional situations of demand slump, the government waived it as 'a matter of grace', as was done in 1921.[60] When the company began to press this as a matter of right, it became an issue of protracted conflict. In February 1932, when the lease deed was renewed for mining ilmenite, the minimum royalty clause had somehow disappeared.[61] This proved to be a costly omission for the government. When the matter was brought to the attention of the company and rectification sought, the company informed that minimum royalty shall be paid provided new leases were granted in Kanyakumari and Kollam.[62] The government initially refused to accede to the request, but later yielded to grant 50 acres at Karunagappally near Kollam in 1939.[63] Significantly, the lease deed of 1932 contained a provision for a rebate to the company if the price of the mineral fell below the prescribed price. In the absence of the minimum royalty clause, the royalty flow reversed during the years 1934-35 to 1936-37. While royalty collected on ilmenite from the company during this period was Bh Rs 1.07 lakh, an amount of Bh Rs 1.51 lakh had to be allowed as rebate.[64]

Defining the market price, in relation to which rebate would be determined, also gave rise to serious disagreement. While the government held that market price represented cif value, the company argued that it meant fob value.[65] It was also found that there was a wide disparity between the fob prices of monazite as furnished by the Hopkin and Williams Company and the F X Pereira and Sons.[66] The former appears to have understated the price and thus managed to evade payment of a higher royalty. However, in the case of the metropolitan company, the government had no means to ascertain the selling price by examining the invoices, certified sales memos and accounts. These were maintained at the company's office in London. The excise commissioner of the government of Tiruvitamkur admitted in 1939: "[N]o examination worth the name is possible in regard to the accounts of this company".[67]

Only as late as 1946, by which time the imperial sun was well on its way out, could the Tiruvitamkur government come out with its hitherto unexpressed policy wishes:

> [N]o mineral sands will be exported hereafter and no licences issued hereafter. If firms which operated in the country want to operate further, they will come into contact with the government of Tiruvitamkur and enter into association with them...[68]

VII
Epilogue

In the post-1950 Keralam, the mineral sands industry continues to be the most important mining activity in terms of value-addition. After the exit of the metropolitan companies from Tiruvitamkur's mining beaches, the major medium for the metropolitan hegemony has been the technology of mining/processing minerals. Both the ilmenite processing companies owned by the government of Keralam[69] are heavily dependent on overseas technology for the manufacture of titanium dioxide. While the Travancore Titanium Products had to seek the help of multinational corporations of Germany and Britain, the Kerala Minerals and Metals was indebted to those of Australia, Britain and the US.[70] Titanium dioxide, used in a variety of industries, has a large all-India market. However, it is the titanium dioxide import policy of the government of India that primarily decides the fortunes of the ilmenite processing companies in Keralam.

The control over the mining of mineral sands in the state is exercised by the government of India through the department of Atomic Energy. The Indian Rare Earths, an undertaking of this department, mines mineral sands, supplies sand to the state government-owned ilmenite processing companies and also exports sands. The Indian Rare Earths charges the ilmenite companies for the mineral sand supplied, although the royalty it pays to the state government is negligible. It is less than 2 per cent as against a royalty rate of 7.5 per cent that was current in the colonial period.

In addition to the monopoly over mining of mineral sands, the government of India has exclusive right over the processing of

monazite because of its strategic importance. The Indian Rare Earths manufactures various rare earth compounds at their factory at Aluva. Since the activity of monazite mining and processing comes under the purview of the Atomic Energy Act, 1962, no questions in relation to it may be raised even in the Indian parliament. Popular anxieties over the possible health hazards of this activity are being arrogantly brushed aside by the atomic energy establishment.[71] Further, mining of sand has rendered the coastal area more susceptible to sea erosion and has already resulted in extensive submergence of land.[72]

The 1990s indicate a new phase of integration, coming about 200 years after Schomberg, the accredited agent of the London Cosmopolitan Mining Company, had inspected the mineral beaches of Tiruvitamkur. Recently, two Australian mining multinationals have entered into agreements with the state-owned industrial development corporation. The two new companies to be floated envisage mining of an additional 5.2 lakh tons of ilmenite from the coast of Keralam. One of the proposed companies would be promoted by the multinational subsidiary Westralian Sands (India) which would hold 89 per cent of the share capital. In the other company, Rennison Goldfield Consolidated and the Indian Rare Earths would together hold 67 per cent.[73] The full-fledged dimensions of this new colonialism is a story that will have to be deferred for another narration.

Notes

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1 For a discussion of the possibilities of the 'dependency scheme' as a methodology for understanding concrete situations of 'underdevelopment', see, Gabrial Palma, 'Dependency: A Formal Theory of Underdevelopment or a Methodology for the Analysis of Concrete Situations of Underdevelopment?', *World Development*, Vol 6, Nos 7-8, July-August 1978, pp 881-924. Palma argues that "we find in these ['dependency'] analyses a methodology adequate for the study of *concrete situations of dependency, from which concrete concepts and theories can be developed...*" (emphasis in the original). For a practical application of the 'dependency approach' towards an analysis of the economy of Keralam, see, K T Ram Mohan, 'Understanding Keralam: The Tragedy of Radical Scholarship', *Monthly Review*, Vol 43, No 7, December 1991. However, I do not subscribe to the paradigm of 'development' which the neo-Marxists share with Marxists in general, and other modernisation theorists.

2 Francis Buchanan gives a detailed account of iron ore deposits, smelting furnaces and processes in central Malabar in the first decade of the 19th century. C K Karim, *Francis Buchanante Keralam* [Francis Buchanan's Keralam (a condensed translation of Buchanan's *A Journey from Madras through the Countries of Mysore, Canara and Malabar*), Vol 2, State Institute of Languages, Tiruvanantapuram, 1981, pp 100-105 and p 162. Also see, V H Diraruddin, 'Malabarile Ootalakal' (Smelting furnaces of Malabar), *Poornodaya*, No 1, pp 9-25. Lieutenants P S Ward and P E Conner, who surveyed Tiruvitamkur in 1816-20 as part of the 'Great Trigonometric Survey of India' reported on quarrying of laterite soil containing iron ore, its smelting into bars, and carrying these bars into the neighbouring markets. Government of Madras, Survey General's Office, *Geographical and Statistical Memoir of the Survey of the Travancore and Cochin States Executed under the Superintendence of Lieutenants Ward and Conner from July 1816 to the End of the Year 1820*, Vol 2, 1901; *Kerala Gazetteers*, Tiruvanantapuram, 1994, p 7, p 119.

3 *Census of India (Travancore) 1931 Report*, Appendix, 'The Declining Industries', pp 457-58.

4 *Nazrani Deepika* (hereafter, *Deepika*) October 9, 1901, and *Malayala Manorama* (hereafter *Manorama*) February 25, 1903 carry reports on gold prospecting/mining in the state.

5 Gold mining in Wayanad has a fairly long history. The rajas and chieftains of Malabar employed their subjects and slaves at Wayanad and obtained gold both from the soils and reefs. As C D Maclean, a British civil servant noted in the early 1880s:

> The gold fields of the Wayanad embrace a large area, and shallow pits and excavations made by the natives in times past, as well as the lines of races formed for conveying water for washing the auciferous soils and pounded quartz are found in numerous places.

C D Maclean (ed), *Manual of the Administration of the Madras Presidency*, (hereafter *Manual of Madras Presidency*) Vol 1, 1885, Asian Educational Services, New Delhi, 1987, p 309.

The gold mines of Wayanad attracted the attention of the government of Madras. From 1803, mining activity was undertaken as a source of revenue. Systematic attempts to value the deposit were made from 1831. In 1878, Brough Smyth was deputed at the instance of the government of India to make a complete investigation, ibid. In 1887, the governor of Madras, Lord Connemara visited the gold fields in Wayanad. For a report of the tour, see J D Reeves, *Narratives of Tours in India Made by His Excellency Lord Connemara, Governor of Madras 1886-1890*, Superintendent, Government Press, Madras, 1891, pp 37-38.

6 Along with laudatory reports on Wayanad gold mining appearing in the London Press, the observations of the officials of the government of India, contributed significantly to the gold mania. For instance, Maclean compared the gold deposits in Wayanad with even those of California and Nevada. He wrote:

> [I]t appears that throughout the Wayanad strong and persistent veins of quartz from two to fifteen feet or more in thickness, and that they are generally more or less auciferous.. The reefs are composed of white crystalline compact quarts, identical in every respect with the reef quartz of Russia, and other gold bearing countries. There are more than one hundred out-crops of quartz in the southern part of South-East Wayanad; the form of the surface of the country admits of these being mined by horizontal shafts; water is abundant at least during nine months in the year, and reservoirs can be constructed at a small cost; and timber for supports can be procured at or near the main auciferous rocks. Maclean, *Manual of Madras Presidency*, p 310.

7 For a detailed account of gold mining/prospecting activities in Wayanad, see, Radhe Syam Rungta, *Rise of Business Corporations in India 1851-1900* (Cambridge: Cambridge University Press, 1970), pp 136-48.

8 *Deepika*, June 20, 1894.

9 Government of India (hereafter, GOI), foreign department (hereafter, For Dept), Internal (hereafter, Intl) B, Proceedings Number (hereafter, Pro No), 119-20, February 1900.

10 A western Indian immigrant trader based at Kochi, P D Sait, was another prospector of mica and graphite during this period. However, he does not appear to have taken up systematic mining. GOI, For Dept, Intl B, Pro No 372, March 1900; also, Pro No 63-64, May 1900.

11 GOI, For Dept, Intl B, Pro No 31, June 1900, also Pro No 63-64, May 1900.

12 Dewan Peishkar-in-charge, Government of Tiruvitamkur [hereafter, GoT] to Acting Resident, June 9, 1906, GoT, Political Department [hereafter, Pol Dept], Bundle Number [hereafter, B No] 31, File Number [hereafter, F No] 67, 1906.

13 GOI, *Census of India Travancore 1911*, Vol 23, Part II Tables (Tiruvanantapuram, Superintendent, Government Press). However, by the end of the second decade of the 20th century, the best graphite deposits in Tiruvitamkur were depleted and the company had moved out from Tiruvitamkur.

14 T K Velu Pillai, *The Travancore State Manual*, Vol 3, (Tiruvanantapuram: Superintendent, Government Press), p 537.

15 K T Ram Mohan, 'Datu Vyavasayattile

Pratisandhi' (Crisis in Mining Industry), *Deseeya Vimochanam*, Vol 1, Nos 7-9, September, October and November 1990.

16 GOI, For Dept, Secret I, Pro No 6042, October 1910.

17 Ibid

18 GOI, Foreign and Political Department [hereafter, For and Pol Dept], Secret, Intl, Pro No 23.

19 GoT, Development Department [hereafter, Devt Dept], B No 16 A2, F No 1128.

20 GOI, For and Pol Dept , Secret I, Pro No 17, November 1916

21 GoT, Devt Dept, B No 40, F No 1901.

22 GoT, Devt Dept, B No 244, F No 341.

23 Interview with Michael Raj of Nanchilnadu, July 28, 1994.

24 Incidentally, this helped a few Nadar Christianikal to rise along the economic hierarchy. Some of these labour contractors even supplied labour to mining sites at Kollam Ibid

25 GOI, Census of India (Travancore) 1921 (Tiruvanantapuram: Superintendent, Government Press), Table No 22, Industrial Statistics Part I, State Summary, pp 110-13, *Census of India (Travancore) 1931*, Part II Tables, Table No 3, Organised Industries: State Summary, pp 184-85

26 GOI, *Census of India (Travancore) 1941*, Part II Tables, (Tiruvanantapuram: Superintendent, Government Press), Table IX Industry

27 'Tiruvitamkotte Lohakhanikal' [Mines in Tiruvitamkur], editorial, *Manorama*, November 20, 1907.

28 Apart from mineral sands, graphite and mica were the major minerals worked in the state. In the case of graphite, the Morgan Crucible Company had a monopoly Production of mica in the state was sporadic, being extremely sensitive to metropolitan demand. During the first world war, the demand for the mineral shot up as it was used in the manufacture of magnetos for aeroplanes. [GOI, Dept of Mines, *Report of the Chief Inspector of Mines in India under the Indian Mines Act (VIII of 1901) for the Year Ending December 31, 1915* (Calcutta: Superintendent Government Printing, 1916), p 3] Extensive prospecting for mica was made by F F Chrestian Company (later merged with Startin and Company to form the Madras Mica Company) during this period [GoT, Devt Dept, B No 4, F No 950/21]. However, commercially viable deposits could not be located Further, with the cessation of war, there occurred a considerable decline in demand. Between 1919 and 1922, the company could export only around 13,511 lbs of mica. From 1923 it altogether ceased to work [A J Van Ross, Excise Commissioner, GoT to Chief Secretary, GoT Devt Dept, B No 25, F No 2357/22]. Thus, before the onset of the mica boom of the 1930s following the development of the electrical engineering industry in the metropolis and the needs of the second world war, mica mining had disappeared from Tiruvitamkur. [For a discussion on the development of mica mining in India since the first world war, see, Keshabananda Das, 'Growth and Decline of the Mica Mining Industry in Nellore, 1911-1950', *The Indian Economic and Social History Review*, Vol 28, No 4, 1991, pp 393-416.]

29 E J Philipose to GoT, September 3, 1920 and September 14, 1920, GoT, Devt Dept, B No 27, F No 726/23; June 12, 1923, ibid, B No 41, F No 1892.

30 E J John, E John Kuruvila and K Chandy to GoT, October 8, 1920 and July 7, 1921.

31 K C Eapen to GoT, 1.12.1096 ME (Malayalam era) (1920-21), Devt Dept, B No 20, F No 625.

32 E Masillamani to GoT, June 13, 1924; GoT to Masillamani, July 26, 1924.

33 GoT, Devt Dept, B No 20, F No 767/22.

34 GoT to K C Eapen, March 20, 1922, GOT Devt Dept, B No 20, F No 625.

35 GoT, Devt Dept, B No 20, F No 767/22.

36 Ibid.

37 E J Philipose and Joseph Andrew to GoT, September 3, 1920; GoT, Devt Dept, B No 27, F No 726/23.

38 GoT to E John Kuruvila, July 21, 1921, GoT, Devt Dept, B No 41, F No 1892.

39 E John Kuruvila to GoT, August 7, 1921, ibid.

40 E Masillamani to GoT, January 29, 1931, GoT, Devt Dept, B No 145, F No 1800/35, Vol 1.

41 Trade Commissioner, India House, London, to Director of Industries [hereafter, Dir of Ind], GoT, July 30, 1931, ibid.

42 E Masillamani to GoT, August 3, 1932, Ibid.

43 J L Pimanda to GoT, April 14, 1931, Ibid.

44 F X Pereira and Sons to GoT, April 21, 1931, Ibid.

45 President, Tiruvitamkur Economic Development Board to Chief Secretary, GoT, August 19, 1931, Ibid

46 Ibid

47 Report of the Geological Asst, GoT, October 27, 1934, Ibid.

48 Excise Commissioner, GoT, to Chief Secretary, GoT, May 3, 1958, GoT, Devt Dept, B No, 244, F No 341.

49 J L Pimanda to GoT, September 6, 1938, GoT, Devt Dept, B No 308, F No 2569.

50 GoT to J L Pimanda, May 26, 1938, Ibid.

51 C P Matthen was the main promoter of the Travancore National and Quilon Bank. Dewan Sir C P Ramaswamy Aiyer suspected that the bank had lent financial support to the popular agitation led by Tiruvitamkur State Congress seeking democratic reforms.

52 Electrical Engineer, GoT to Chief Secretary, GoT April 17, 1939, Ibid.

53 Excise Commissioner, GoT to Chief Secretary, GoT, Devt Dept, B No 244, F No 341.

54 G H Tipper, Minerals Advisor, London to Dir of Ind, GoT, Devt Dept, B No 244, F No 341

55 GOI, *Statistics of Travancore*, 1935-36 (Tiruvanantapuram: Superintendent, Government Press, 1937)

56 Excise Commissioner, GoT, to Chief Secretary, GoT, May 3, 1938, Devt Dept, B No 244, F No 341.

57 Kasturbhai Lalbhai, *Report on the State-Owned and State-Aided Industrial Concerns in Travancore-Cochin* (Tiruvanantapuram 1952), p 38.

58 State geologist to Chief Secretary, GoT March 15, 1921, GoT, Devt Dept, B No 46 F No 336.

59 Geological Assistant, Dept of Ind, GoT, Devt Dept, B No 7, F No 859/21.

60 GoT to Hopkin and Williams [hereafter HW], GoT, Devt Dept, B No 46, F No 336

61 Excise Commissioner, GoT to Chief Secretary, GoT, May 3, 1938, GoT, Devt Dept, B No 244, F No 241.

62 HW to GoT, October 6, 1937, Ibid.

63 Excise Commissioner's Note, January 13 1939, Ibid.

64 Excise Commissioner, GoT to Chief Secretary, May 3, 1938, ibid.

65 Joint Note of Dir of Ind, State Geologist and Excise Commissioner, January 1939, ibid

66 Excise Commissioner, GoT to Chief Secretary, GoT, May 3, 1939, ibid.

67 Ibid.

68 Dewan's Statement on the Budget for 1121 ME (1945-46), *Proceedings of the Sri Mulam Popular Assembly* (hereafter, SMPA), 1945-46, p 35.

69 However, till 1960, 26.3 per cent of the share capital of Travancore Titanium Products (hereafter, TTP) was held by the Indian Titan Products, a subsidiary of the British Titan Products and other metropolitan companies. By 1985, metropolitan shareholding was reduced to 10.87 per cent These shares were held by the Tioxide Group UK. See TTP, *Annual Report(s)* for 1960 and 1985.

70 TTP had entered into consultancy, collaboration agreements with Lurgi Chemi FRG in 1980, with Tioxide Group, UK, in 1981-82, and with Babcock Woodal Duckham, UK, in 1988. Kerala Mineral and Metals [hereafter, KMML] sought the assistance of Australia Mineral Developmen Corporation in 1973-74, Benelite Corporation, USA, Kerr Mc Gee Chemica Corporation, USA, and Woodall Duckham (Chemicals), UK, in 1976-77. See *Annua Report(s)* of TTP and KMML for respective years.

71 A retrospective epidemiological study o the workers at Indian Rare Earths, Aluva (hereafter, IRE) demonstrated a significan difference in the incidence of cancer, hear diseases and sterility between them and the control population. Genetic disorders among children of IRE workers were also high. V T Padmanabhan, 'The Number Game Occupational Health Hazards at Indian Rare Earths Plant', *Economic and Political Weekly*, Vol 21, Nos 10-11, March 8-15 1986, pp 443-52.

72 Interviews with V T Padmanabhan, July 4 7, 1995.

73 'CITU Asks KSIDC to Publish MoUs' report, *The Hindu* (Tiruvanantapuram), July 5, 1995, p 3.

Modernity and Ethnicity in India

A History for the Present

Dipesh Chakrabarty

The rise of the 'Hindutva' movement has caused a backlash against the critiques of modernity and 'secularism' in which Indian intellectuals have been engaged for some time. But we short-change ourselves by attempting to understand ethnic conflicts in India through a grid that has liberalism and fascism locked into an unremitting binary opposition, as though they belong to entirely different histories. Rather than forcing a choice between secularism and religion, we need to explore the links between ethnic conflict and the modern governing practices that the British introduced into India as the historical bearers of 'Enlightenment rationalism'.

I

OVER the last few decades some distinguished Indian intellectuals have been engaged in a critical revaluation of the intellectual and institutional legacies of the European Enlightenment in the subcontinent.[1] For a long time this critique was seen by the Indian left as a quaint form of intellectual Gandhism – sentimental perhaps even noble minded in its rejection of materialist values but in the end unpractical and unthreatening. The left did not take much notice of it. Things changed however in the 1980s. There was post structuralist and deconstructionist philosophy, now available in English translation that coupled with some strands of feminist theorising increasingly called into question Enlightenment rationalism and the meta narratives of progress/emancipation that the left had never questioned. There was also the development in the US particularly after Said's critique of orientalism of a whole field of study that devoted itself to understanding the formation of colonial subjectivities through examining colonial discourses.[2] Within the field of Indian history anthropologist historians such as Arjun Appadurai, Nicholas Dirks, Gyan Prakash and other scholars working under the intellectual leadership of Bernard Cohn in the 1980s also began to draw our attention to the way that colonially instituted practices and knowledge-systems affected the formation of new subjectivities in India and cast a lasting shadow over emerging politics of identity in the subcontinent. And then at the same time there was the *Subaltern Studies* collective Gramscian in inspiration and led by Ranajit Guha, who developed a critique of nationalism and of the political imagination that saw the nation state as the ideal form for a political community. These heterogeneous strands are now part of what is sometimes broadly referred to as the 'critique of modernity' debate in India.

The rise of the 'Hindutva' movement has now caused an understandable backlash against these critiques of modernity' and of the so-called Enlightenment rationalism. The sense of a crisis on the part of the left in India was aggravated and deepened by the way the leaders and followers of this Hindutva movement vandalised and destroyed a 16th century mosque in the north Indian city of Ayodhya on December 6 1992 on the excuse that the mosque had been forcibly built on what was, to their minds, a temple marking the birthplace of the mythical Hindu god king Ram. This Hindu extremist movement brewing since the early 1980s with anti-Muslim hatred and a fear of a weakened 'Hindu' race/nationality as its main ingredients and enjoying the backing of a large number of Hindus inside and outside India has caused both concern and debate among Indian intellectuals on questions of secularism', tolerance' modernity and what the European Enlightenment means for intellectuals in India. It is this debate that provides the context for what follows. I have nothing to say in support of the Hindu extremists whose actions in many instances have only bred a politics of ethnic hatred and murder. But it does seem to me that the way the 'critique of modernity' debate has been positioned by some Indian Marxist and left liberal intellectuals in their rush to fight the so called Hindu fundamentalists forecloses the space for critical thinking instead of expanding and enriching it. Faced with the Hindu challenge these intellectuals have gone back to some of the classical shibboleths of Marxism and liberalism – the call for class struggle and a non-religious if not altogether atheist public sphere. They express the fear as some do in the west that to develop a critique of the legacies of Enlightenment thought at this moment of (Indian) history is to betray the cause of Marxism and liberal principles and thus play into the hands of the 'reactionaries (in this case, the Hindutva mob). Some sub continental Marxists, true to a long tradition of debate within the Communist Party, have begun to describe others as enemies of the left. Aijaz Ahmad, who clubs together Levi Strauss, Foucault, Derrida, Glucksmann[,] Kristeva as reactionary anti humanists dismisses the important Indian critics Homi Bhabha and Partha Chatterjee in a footnote to his book *In Theory* with the intriguing suggestion that while post structuralism, whenever applied to things Indian acquires of necessity a subordinate and dependent character, Marxism (including presumably, Ahmad's own) wonderfully escapes this fate.[3] In the more hyperbolic statements it is even suggested that to develop critiques of Enlightenment rationalism is to produce 'cultural relativism at best and strident fascist indigenism at worst. Sumit Sarkar for instance has recently remarked in an article on the Hindutva movement that the rejection of Enlightenment rationalism by the Indian critic of modernity is frighteningly evocative of what happened in the intellectual history of fascism in Europe.[4] The argument, which conflates a critique with wholesale rejection is based on a simple syllogism and on some perceived historical parallels. Here is how the syllogism runs in Sarkar's argument:

(1) Fascist ideology in Europe owed something to a general turn of the century move away from what were felt to be the sterile rigidities of Enlightenment rationalism.

(2) [N]ot dissimilar ideas have become current intellectual coin in the west and by extension they have started to influence Indian academic life.

(3) That these current academic fashions' (Sarkar mentions postmodernism) can reduce the resistance of intellectuals to the ideas of Hindutva has already become evident.[5] Examples: The critique of colonial discourse has stimulated forms of indigenism not easy to distinguish from the standard Sangh parivar [i e the Hindu fundamentalists] argument that Hindutva is superior to Islam and Christianity (and by extension to the creations of the modern west like science democracy or Marxism) because of its allegedly unique roots. Sarkar warns that [a]n uncritical cult of the popular or subaltern, particularly when combined with the rejection of Enlighten

ment rationalism... can lead even radical historians down strange paths" that, for Sarkar, bear "ominous" resemblance to Mussolini's condemnation of the "teleological" idea of progress and to Hitler's exaltation "of the German *volk* over 'hair splitting intelligence' ".[3]

I have to admit that I have a vested interest in continuing this debate because I have been named by Sarkar as one of the 'radical' historians undergoing this 'strange' transformation.

I do not deny the political need to fight Hindutva for the danger of an Indian 'Hindu' fascism is real, though it is sometimes exaggerated. Nor are the parallels drawn with European history always accurate (or when they are, their significance runs contrary to the direction of Sarkar's argument).[4] But we short-change ourselves intellectually when we attempt to understand the current ethnic conflicts in India through a grid that has liberalism and fascism locked into an unremitting binary opposition to each other, as though they belong to entirely different and unconnected histories. In the western democracies, there has been a long tradition of doing this precisely by 'ethnicising' the histories of modern authoritarianisms, fascist or otherwise, i e, by treating them as problems produced by other peoples' cultures, those of the Germans, the Japanese and now the so-called 'Asian tigers'. In writing histories of modern European thought and institutions, no anti-imperial historian can ever afford to forget what W E B DuBois once said:

> There was no Nazi atrocity – concentration camps, wholesale maiming and murder, defilement of women or ghastly blasphemy of childhood – which the Christian civilisation of Europe had not long been practising against coloured folk in all parts of the world in the name of and for the defence of a Superior Race born to rule the world.[7]

The connection that DuBois makes between this atrocity and the foundations of modern, liberal democracies in both the New and the Old Worlds will ring true to all those whose histories have been irretrievably altered by the rapacities of modern European imperialisms. That a high priest of Enlightenment rationalism such as Voltaire would think of the blacks as people who approximated the 'physical features and mental processes' of animals, was a structural, and not an accidental, feature of Enlightenment thought.[8] One cannot simply separate out the 'decent tendencies' in Enlightenment thought from the indecent ones. Yet, there is a discernible intellectual habit that makes us treat contemporary instances of racist or ethnic hatred as though they were aberrations in the history of modern nation-states, civil societies and their attendant institutions. This tendency is not surprising in male intellectuals of the west who want to rescue the story of modern liberalism from any necessary association with imperialism. The connection was contingent and historic, they in effect argue, holding forth the promise that, if only the fascists-fundamentalists could be kept at bay, we would enjoy a nice, benign modernity (which might even graduate one day, when capitalism has played itself out, to the higher historical stage of socialism). It surprises me, however, when intellectuals from a colonial formation embrace the institutions of modernity, however inevitable and powerful they might seem, without any sense of irony qualifying their mood of welcome.

There is an Indian character in *The Satanic Verses* who says: "Battle lines are being drawn in India today, secular religious, the light versus the dark. Better you choose which side you are on".[9] It is precisely this choice that I am going to refuse in this analysis. I want to explore instead some of the complex and unavoidable links that exist in Indian history between the phenomenon of ethnic conflict and the modern governing practices that the British introduced into India as the historical bearers of Enlightenment rationalism. This is not an argument against liberal values nor against the idea of modernity as such. But shadows fall between the abstract values of modernity and the historical process through which the institutions of modernisation came to be built. It is true that at this moment, there do not seem to be any practical and generalisable alternatives to the institutions of capitalism and the modern state in India. In all our actions we have to take into account their reality, i e, their theoretical claims as well as the specific histories through which they have developed in India. But it is nevertheless important that we create an Archimedean point at least in theory in order to have a longer term perspective on our problems. Today's understanding of what is 'practical' does not have to constitute our philosophical horizon – or we submit, even inside our heads, to what already exists. This short review of the history of modern governmental practices in India is offered in the spirit of a dictum by a great thinker of the European Enlightenment – in reproducing it, I only reverse the order of his statement: "Obey but argue as much as you want and about what you want."

If a pristine form of liberalism (the Indian word is 'secularism') is one danger besetting the analysis of contemporary racism in Indian, the other danger is that of orientalism, sometimes indistinguishable from statements that claim that India could only be understood on 'Indian', or better, 'Hindu', terms. The possibility that the current Hindu versus Muslim or upper versus lower caste conflicts in India may be, in a significant sense, a variant of the modern problem of 'ethnicity' or 'race', is seldom entertained in discussions in the western media, both Hinduism and caste being seen, not altogether unreasonably, as particular to the subcontinent. Even serious and informed scholars are not immune to this tendency. Klaus Klostermaier's knowledgeable survey of Hinduism published from New York in 1989 warns us against understanding Hindu politics on anything but 'Hindu' terms:

> Political Hinduism, I hold, cannot be understood by applying either a Western-party democratic gauge or a Marxist-socialist pattern. Its potential has much to do with the temper of Hinduism, which was able throughout the ages to rally people around causes that were perceived to be of transcendent importance and in whose pursuit ordinary human values and considerations had to be abandoned.[10]

Even when the problems are placed in an international framework, as in some passages of V S Naipaul's recent book *India: A Million Mutinies Now*, what one gets is a patronising pat on the back, a view of history somewhat reminiscent of what Hegel said about India in his lectures on the philosophy of history: "Hindoo political existence", said Hegel, "presents us with a people but *no state*" [Hegel's emphasis].[11] This, for Hegel, meant the worst kind of despotism and a necessary absence of history:

> It is because the Hindoos have no History in the form of annals (historia) that they have no History in the form of transactions (resgestae); that is, no growth expanding into a veritable political condition.[12]

Naipaul's Hegelianism is neither conscious nor sophisticated. He simply reproduces the idea that an awakening to 'history' is the condition for democracy. For him, therefore, all the ethnic ferment in the Indian scene is only a sign of the youth of India's historical consciousness; with time would come the maturity that nations with an older sense of their history presumably possessed:

> To awaken to history is to cease to live instinctively. It was to begin to see oneself and one's group the way the outside world saw one; and it was to know a kind of rage. India was now full of this rage. There had been a general awakening. But everyone awakened first to his own group or community; every group thought itself unique in its awakening; and every group sought to separate from the rage of other groups.[13]

Within India, too, the same law of oversight rules, for 'racism' is thought of as something the white people do to us. What Indians do to one another is variously described as 'communalism', 'regionalism' and 'casteism', but never 'racism'. There are, of course, particularly 'Indian' twists to this story, and it is also true that 'racism', properly speaking, has social-Darwinist connotations and should not be conflated

word 'racism' has the advantage of not making India look 'peculiar'. A relative of mine wanting to sell a plot of land near Calcutta was recently told by the local Communist leaders that he could indeed sell his land but not to Muslims. How is that any different, I would want to know, from an English landlady asking, on being told on the phone the name of a prospective tenant, "Is that a Jewish Kahn or a Pakistani Khan?", both varieties being, at least in this apocryphal story, undesirable.

In focusing on the theme of contemporary Indian ethnic intolerance, I will argue that the experiment of nation-making in India shows how modern problems of ethnicity cannot be separated from modern means of government and communication. My emphasis, in other words, will be on the way the development of a modern public-political life in India has called into being constructions of both 'Hinduism' and 'caste' that do not admit of such simple binary distinctions as Salman Rushdie's character invokes: secular/religious, liberal/fundamentalist, nationalist/communal.

Let me try to anticipate and forestall a few misunderstandings, however. It is not my intention to deny the traditions of violence that existed in India before British rule. There are recorded instances of Hindu-Muslim tensions during the pre-colonial period. Historians and anthropologists are agreed that the brahmanical claim to ritual supremacy was seldom accepted without challenge and contestation by other social groups including those whom we know as the 'untouchables'. The eminent historian Romila Thapar, citing examples from the period between the seventh and the 12th centuries of 'Hindu' sects destroying Buddhist and Jaina monasteries and sometimes killing the monks, has usefully reminded us in a recent article that the "popular belief that the 'Hindus' never indulged in religious persecution" is simply untrue.[14] This ancient history is something that I neither discuss nor deny in this essay, for my point is different. Something has fundamentally changed about both Hinduism and caste since British rule and particularly since the beginning of the 20th century. If I may put it simply by using the example of caste, the change may be crudely described as this. We know from anthropologists and historians of the so-called caste system that there were no strong systemic rules guiding everybody's caste identity. This could be a matter of negotiation between individuals and groups. Marriage rules and rules of commensality could change within one's own lifetime or over generations, depending on factors such as social, economic and geographical mobility. In other words, caste society operated as a non-standardised system, and rules guiding caste transactions would have appealed to the participant a sensitivity to the context. Just as they sought to give India a standardised legal system, the British also attempted to fix and officialise collective identities (such as caste and religion) in the very process of creating a quasi-modern public sphere in India.[15] The concept and the institutions that make up the public sphere – free press, voluntary associations, avenues for free debate and enquiry in the public interest – are modern Europe's intellectual and practical gifts to the people they considered less fortunate than themselves and at whose doors they arrived as raging, mad imperialists. My point is that modern problems of Hinduism and caste are inseparable from the history of this modern public life in India that the British instituted and the nationalists preserved in what they thought were the best interests of the country.

II

The most far-reaching and fundamental innovation that the British introduced to Indian society, in my view, was the modern state – not a nation-state, for that was what the nationalist movement created, but a modern state nevertheless. One symptom of its modernity was that its techniques of government were very closely tied to techniques of measurement. From surveys of land and crop output to prospecting for minerals, from measuring Indian brains (on behalf of the false science of phrenology) to measuring Indian bodies, diets and life spans (i e, laying the foundations of physical anthropology and modern medicine in India), the British had the length and breadth of India, her history, culture and society mapped, classified and quantified in detail that was nothing but precise even when it was wrongheaded. The most dramatic examples of this governmental concern with measurement were the decennial Indian censuses, the first of which was published in 1872. Since the British did not go to India in search of pure knowledge, all these studies were produced in the cause and in the process of governing India, and it is this pervasive marriage between government and measurement that I take as something that belongs to the deep structure of the imagination that is invested in modern political orders.[16] Without numbers, it would be impossible to practise bureaucratic or instrumental rationality.

This is not to say that pre-modern government had no use for numbers. The Mughals had statistics of produce, land and revenue, among other things. Historians of demography talk about ancient censuses in such distant and disparate places as ancient China, ancient Rome (the word 'census' itself being of Roman origin) and in the Inca society of Peru. But much of this information was unsystematically collected and seldom updated with any regularity.

Systematic collection of detailed and classified statistics for the purpose of ruling seems to be intimately tied to modern ideas of government. The history of the very discipline of 'statistics' carries this tale. The word 'statistic', etymologically speaking, has the idea of statecraft built into it. *The Shorter Oxford Dictionary* tells us that, 'in early use', statistics was "that branch of political science dealing with the collection, classification, and discussion of facts bearing on the condition of a state or community". Gottfried Achenwall, who, as Ian Hacking informs us, was the first to coin the word 'statistics', intended it to imply a "collection of 'remarkable facts about the state' ".[17] While the census itself is an old idea, the first modern census, according to some scholars, was taken in the US in 1790 and the first British census in 1801. The Indian censuses were not to appear until late in the 19th century, but the East India Company caused quite a few regional censuses to be taken before the period.

Measurement is central to our modern ideas about fairness and justice and how we administer them, in short, to the very idea of good government. Foucault has emphasised in several places – especially in his essay on 'governmentality' – how this has been critically dependent on 'the emergence of the problem of population' in the 18th century, and therefore connected to the development of the other important 'science' of the same period, that of economics.[18] Benthamite attempts at using law for social engineering – the idea, for instance, that punishment should be in proportion to the crime committed or the utilitarian aim devising a society that maximises the pleasure of the maximum possible number of people – all speak a language borrowed from mathematics and the natural sciences (unsurprisingly, given the connection between Enlightenment rationalism and scientific paradigms). The 1790 American census had to do with the idea of proportionality in the sphere of political representation. Ideas of 'correspondence', 'proportionality' and so on mark Rousseau's thoughts on 'equality'. Without them, and without the numbers they produced, the equal opportunity legislations of our own period would be unworkable. And to go from the institutional to the personal, a gesture toward measurement is inherent in the question that we have now made into a universal litmus test of conjugal happiness: "Does he share the domestic chores *equally*?" A generalised accounting mind-set is what seems to inhabit modernity.

The British, as the representatives and the inheritors of European Enlightenment, brought these ideas to India. It is, in fact, one of the ironies of British history that they

became political liberals at home at the same time as they became imperialists abroad. British policy in India was forever haunted by this contradiction. While the British would never take the step, until 1947, of granting India full self-government, they were often concerned about being 'fair' to the different competing sections that, in their view, made up Indian society. These sections had been defined by the British, quite early on, in religious and caste terms. A count made of the population of Bombay in 1780, for instance, divided the population into 'socio-religious communities'.[19] In the 18th century, British amateur historians often portrayed India as a society weakened by its internal divisions into various religions and castes, an understanding shared later on by Indian nationalists themselves. Understandably, then, categories of caste and religion dominated the censuses that the British undertook in India. At every census, people were asked to state their religion and caste and, as the American historian Kenneth Jones has pointed out, this was in marked contrast to what the British did at home. Religion, says Jones, was never an important category in the British censuses for the period 1801 to 1931. Only once, in 1851, were the British asked about their religious affiliations, and answering the question was optional.[20] Counting Hindus, Muslims, Sikhs, and untouchables became a critical political exercise, particularly in the 20th century as the British began to include Indian representatives in the legislative bodies in very measured doses. What made the census operations critical was that the British, in trying to be fair referees, made the process of political representation 'communal' - seats in the legislative assemblies were earmarked for different communities according to ideas of proportionality. Nationalists like Nehru and Gandhi abhorred this process and the ideology that governed it, namely, 'communalism', a word that still leads a stigmatised existence in India and works as a surrogate for 'racism'.[21] They pointed out, with some justice, that it was invidious to treat 'untouchables' as a 'community' separate from the 'Hindus'. A language-based definition of political communities would have seemed more 'natural' to them, but post-independence Indian history has shown that language is no surer a guide to ethnic identity and inter-ethnic peace than religion. Heads have been regularly broken in the subcontinent over linguistic issues since the 1950s, the liberation war of Bangladesh in 1971 being only a dramatic example of the process. Political leaders of the Muslims and the untouchables, on the other hand, felt much happier going along with the British-devised arrangements until the final decade before independence and the partition of the country. Of particular importance in the Indian story is the category 'scheduled caste', which the British coined in 1936 (and the government of India has retained) and which was so-called because it referred to a schedule of particularly disadvantaged castes that was drawn up for "the purpose of giving effect to the provisions of special electoral representation in the Government of India Act, 1935".[22] It represents a pioneering attempt at affirmative action.

Historians and political scientists studying modern India have recently made several attempts to understand what happened to ethnic identities through this process of a quasi-modern, albeit colonial, state instituting, through modern means of measurement, a structure of political representation tied to notions of proportionality. What, in other words, did the census do to identities? Historians and anthropologists of colonial India have reported a social process akin to what Ian Hacking in his essay 'Making Up People' calls 'dynamic nominalism': people came to fit the categories that the colonial authorities had fashioned for them. Hacking explains dynamic nominalism thus:

> You will recall that a traditional nominalist says that stars (or algae or justice) have nothing in common except our names ('stars', 'algae', 'justice'). The traditional realist in contrast finds it amazing that the world could so kindly sort itself into our categories. He protests that there are definite sorts of objects in it. . which we have painstakingly come to recognise and classify correctly. The robust realist does not have to argue very hard that people also come sorted. A different kind of nominalism – I call it dynamic nominalism – attracts my realist self, spurred on by theories about the making of the homosexual and the heterosexual as kinds of persons or by my observations about official statistics. The claim of dynamic nominalism is not that there was a kind of person who came increasingly to be recognised by bureaucrats or by students of human nature but rather that a kind of person came into being at the same time as the kind itself was being invented. In some cases, that is our classifications and our classes conspire to emerge hand in hand, each egging the other on.[23]

The Indian political scientist Sudipta Kaviraj has pursued a similar argument with regard to the history of 'communities' in pre-British and British India. 'Communities' in pre-British India, says Kaviraj, had 'fuzzy' boundaries; in British India they became 'enumerated'. By 'fuzzy', Kaviraj means vague boundaries which do not admit of discrete, either/or divisions. Census or official enumerations, however, give us discrete kind of identities even if particular identities change, as indeed they often do, over time. For the purpose of affirmative action, a 'scheduled caste' person is a 'scheduled caste' person is a 'scheduled caste' person. The distinction that Kaviraj draws is parallel to one that Hacking draws in his attempt to find a path somewhere between the epistemological obstinacies of the nominalist and realist positions:

> It will be foolhardy... to have an opinion about one of the stable human dichotomies, male and female. But very roughly, the robust realist will agree that there may be what really are physiological borderline cases, once called 'hermaphrodites'. The existence of vague boundaries is normal: most of us are neither tall nor short, fat nor thin. Sexual physiology [i e, the categorial structure of sexual physiology] is unusually abrupt in its divisions.[24]

The kernel of Kaviraj's argument is that the post-Enlightenment governing practices that the British introduced into India and which entailed counting collective identities in an all-or-nothing manner, enabled people to see and organise themselves in light of these categories. I shall quote here at some length Kaviraj's own gloss on these terms, as all my knowledge of Indian history as well as my lived experience of India compel me to agree with him. Kaviraj writes:

> Communities were fuzzy in two senses. Rarely, if ever, would people belong to a community which would claim to represent or exhaust all the layers of their complex selfhood. Individuals on suitable occasions could describe themselves as *vaisnavas*, Bengalis or more likely *Rarhis, Kayasthas*, villagers and so on; and clearly although all these could on appropriate occasions be called their *samaj* [society/community]... their boundaries would not coincide. ...[Their identity] would be fuzzy in a second sense as well. To say their community is fuzzy is not to say it is imprecise. On the appropriate occasion, every individual would use his cognitive apparatus to classify any single person he interacts with and place him quite exactly, and decide if he could eat with him, go on a journey, or arrange a marriage into his family. It was therefore practically precise, and adequate to the scale of social action. But it would not occur to an individual to ask how many of them there were in the world, and what if they decided to act in concert...[25]

I would like to modify Kaviraj's incisive analysis in one respect, however. The movement from 'fuzzy' to 'enumerated' communities did not represent a complete change of consciousness. In their everyday lives, in negotiating the spheres of friendship and kinship, say, Indians, like human beings everywhere, are comfortable with the indeterminacies of ethnic identities, and share none of the tenacity with which social scientists and governments hang on to the labels that inform their sense of both analysis and action. Yet the very existence of administrative categories of ethnicity – whether one is looking at the international level or at developments within a country –

suggest a modern, public career for ethnic ags, a 'national' identity being its highest form. It is, of course, within this sphere that he identity of being Indian or Hindu or Muslim or scheduled caste takes on a new political meaning. This meaning resides alongside, and is interlaced with, the more 'fuzzy' sense of community.

The late 19th century censuses and other similar institutions, then, reconstituted the meaning of 'community' or 'ethnicity' and gave Indians three important political messages, all of which are entirely commensurable with liberal political philosophy as we know it. These messages were: (a) that communities could be enumerated, and that in numbers lay one's political clout; (b) that the social and economic progress of a community was a measurable entity, measured in the case of Indian censuses by their share in public life (education, professions, employment, etc); and (c) that this enabled governments and communities to devise objective tests for the relative 'backwardness' or otherwise of a community.

Indians were quick to learn the art of participation in this public sphere. They learnt, as we all do when we want to take advantage of equal opportunity legislation, that modern governments have rather limited intelligence; their principles of distributive justice require simple, homogeneous, sharply delineated identities, the kinds that passports bear. While identities can proliferate and have a tendency to do so under the pressure of the politics of democratic representation, the sense of multiple identities that propels individuals in their everydayness is too complex for the rules that govern the logic of representation in modern public life, where identities, however numerous and internally differentiated they may be, must each remain distinct and discrete in the competitive race for goods and services that the state and civil society may offer. It is this pressure, which is essentially the pressure that modern political orders produce, that led many Indian leaders to profess simplistic, homogeneous ethnic identities in 'public life', disregarding all the heterogeneity and diversity of Indian social practices. These were categories by which few leaders actually lived in their private capacity.

When we look back now at India in the 1870s and 1880s, it becomes clear that the era of modern, competitive, governmentally-defined ethnic identities familiar to us in liberal democracies, had already arrived. The peculiarity of colonial Indian history lay in the fact that these identities were based on religious categories because of a certain degree of reification of these categories by the British. (But even if the British had picked language as a mark of distinction in this multi-lingual country, the result would have been the same.) By the 1890s, Hindu and Muslim leaders were quoting census figures at each other to prove whether or not they had received their legitimate share of benefits (such as employment and education) from British rule. The rise of modern caste consciousness shows a similar concern for the measurement of 'progress' in public life. The famous anti-brahman 'manifesto', produced in Madras in 1916 by the non-brahman caste who formed a new political party, owed its rhetorical force to the statistics the government had collected to demonstrate a brahman 'monopoly' of the civil service.[26]

Demography was pressed into the service of such ethnic jealousies between Hindus and Muslims or between castes by several authors who used the censuses to make their points. One example of this process, discussed by Kenneth Jones, is a set of articles published by a Bengali author, U N Mukherji, in 1909 (a period in Indian history when the Muslims were being given reserved seats in the legislature by the British). In these articles, entitled 'A Dying Race', Mukherji used the census data from 1872 to 1901 to demonstrate, to the satisfaction of many Hindus, "that within a given number of years all Hindus would disappear from British India". In doing this, writes Jones, Mukherji "was actually following the lead of M J C O'Donnell, Census Commissioner of Bengal for 1891, who had calculated 'the number of years it would take the Hindus to altogether disappear from Bengal if Muhammadan increase went on at the rate it was doing' ".[27]

Let us put aside for the moment what to our ears may sound 'racist' in these remarks. My point is that the social assumptions on which the classification and organisation of census figures rested were fundamentally modern: they showed India to be a collection of 'communities' whose 'progress' or 'backwardness' could be measured by the application of some supposedly 'universal' indices. That is exactly how the modern world of nation-states is structured – it is a united but internally hierarchised world where some countries are described as measurably – or should I say immeasurably – more 'advanced' than others. This structure of relationships has the nature of what scientists call fractals or self-similar patterns – it is capable of reproducing itself at many different levels, between nations, between modern ethnic groups, between perceived races and so on. It is what constitutes the liberal idea of competitive pluralism. As an idea, as the French historian Lucien Febvre once reminded us, it has been with us since the second half of the 18th century.[28] It was packed into the idea of 'civilisation', a word the French started to use in the 1760s and which soon found its way into the English language to provide the noblest justification for England's work in India. The word 'civilisation' has long since fallen out of favour, we preferred to talk about 'progress' in the 19th century and 'development' in the 20th, but the idea of a united world with an internally articulated hierarchy measurable by some universally-agreed indices, has remained with us. How strongly the Indian middle classes internalised this idea is suggested by the following quotation from a Bengali book of morals that was published in Calcutta about 140 years ago for the consumption of children. I quote from the eighth edition of the book, printed in 1858. Notice how the world is seen as both one and hierarchical, the observable differences in standards of living between countries being – to make a conscious gesture toward the idea of measurement – proportional to their "total national efforts":

> Countries where people are averse to labour ...are uncivilised. The Aboriginals of America and Australia as well as Negroes are still in this state. They live in great hardship without adequate food and clothes, and they do not save anything for bad times... The Germans, the Swiss, the French, the Dutch and the English are the most industrious nations/races ['jati'] of the world. That is why they enjoy the best circumstances among all nations.[29]

This language would now appear offensive but there is a homology between what this children's primer said and the sensibility that makes of the modern industrialised nations a model for the rest of the world to follow. We all partake of this sensibility and I am no exception. All I am saying is that this sensibility, our commonsense on these matters, is undergirded by the mechanisms of the modern state and the universal requirements of governmentality, the same mechanisms that influence our constructions of competitive blocs of ethnicity in the public sphere. Hindus, Muslims, the scheduled and lower castes of India, both during and after British rule, have in a sense done no more than apply this sensibility to their public and political lives.

III

But of course they have done more than that. If India were simply a place where ethnicity was contained within the liberal structure of competitive pluralism, it would not have made news and I would not be discussing it today. Ethnic strife in India has spilled blood in large amounts at different points in history from the 1890s onward. Recent problems in Assam, Punjab and Kashmir have been particularly glaring. What then is the difference between the recent experience of ethnicity in western liberal democracies and the contemporary Indian experience?

The difference came to me forcefully in 1989 when I received a (form) letter from

the Australian prime minister encouraging me (and others) to become Australian citizens. In that letter the prime minister went to some trouble to spell out what it meant to be an Australian. He said: it was not the colour of your skin, or your religion or the language you spoke that made you more Australian than others; being an Australian meant believing in freedom of speech, of association, in everyone having 'a fair go', etc. This letter prompted me to subject myself to some imaginary tortures (of the Geoffrey Robertson kind). For example, I asked myself if this were all there was to being an Australian then what would be my proper patriotic response if Australia ever went to war with a nation that professed the same liberal values but was much better equipped to protect them and hence by definition protect my 'Australianness' as well? (Of course, a Margaret Thatcher would argue that a liberal democratic country never starts a war, so the question would not arise!). A little reflection made it clear that the prime minister was speaking in a historical context that afforded him one rare luxury – he did not feel any pressure to spell out what made Australians different from others. The letter, by implication, was relegating 'cultural difference' to the sphere of the personal. If pressed, a liberal would no doubt tell me – as the British Muslims who burned *The Satanic Verses* at Bradford were often reminded – that 'ethnicity' could find a place in public life so long as its expressions were in conformity with the 'core values' of the nation (as defined by the state). Ethnicity functions here under the aegis of equal opportunity principles, in the form of a pressure group – in my case, an Indian Association which demands things like time-slots on Australian public radio or funding for community schools as part of liberal pluralist multiculturalism. As Talal Asad has shown in his discussion of the Rushdie affair, there are hidden demographic assumptions behind this position, particularly that of a continuous dominance of a European-derived, if not an English-speaking, majority.[10] Of course, one would also have to take into account particular Australian institutions – the welfare state, a relatively prosperous economy, the structure of the Australian Labour Party, the official policy of multiculturalism, etc – that have historically played a role in managing ethnic conflict in public life. That Australia would be able to retain this multicultural tolerance of ethnicity in public life if the cultural dominance of its Anglo-Celtic or at least European majority were ever seriously threatened, is far from certain.

Modern ethnic consciousness in India have been fashioned under circumstances in which the politics of cultural difference has been of pre-eminent value. The point is that the question of Indian unity has never been settled beyond all doubt and disputation, nor has there been any one, culturally homogeneous and dominant, majority ethnic group that could both dominate as well as effectively claim to represent all Indians (at least until independence – one might argue that the Hindu extremist party, the BJP, are trying to develop one now, precisely by denying the heterogeneity that characterises Hinduism). The British cobbled a political India together for reasons of administrative convenience. The nationality question was muddled from the beginning. In the public sphere that the British created, there was no one, universally agreed-upon 'Indian' ethnicity. The struggle to produce a sense of cultural unity against the British made mainstream Indian nationalism culturally Hindu. The Muslim search for Pakistan emphasised Islam. The lower castes' struggle for social justice produced anti-brahmanism. After independence, in the 1950s and the 1960s, there were the 'tribal' communities of the Nagas and the Mizos on the north-eastern frontier of the country who had to be bludgeoned into becoming Indians. The last 15 or 20 years have seen an explosive combination of democracy and demography. Indian population has almost trebled since independence. The growth and diversity of the middle class may be judged from the fact that while at independence there was consensus that the number of important languages was 14, there are now daily newspapers published in more than 78 different languages.[11] This middle class has tasted consumerism which has increased the sense of competition in urban life. The secessionist aspirations in Kashmir, Punjab and parts of Assam have gained in strength in recent years. Caste, particularly the Indian policy of positive discrimination in favour of the lower castes, has become an extremely contentious issue in public life. And the latest attempts by the extremist Hindu political parties to convert Hinduism into a strong, monolithic and militant religion have given many Indian Muslims understandable nightmares.

Fundamentally, like the former Soviet Union, India remains in part an imperial structure held together by strong tendencies towards centralism. Unlike the Soviet Union, however, those centralist tendencies exist within, and must work through, a democratic political structure which also gives the state more popular legitimacy than the Stalinist states ever had. Indians have an investment in electoral democracy, as was proven in the unpopularity of Indira Gandhi's two year emergency of 1975-77. Yet the ideological scene has changed.

This centralising tendency was once most powerfully expressed in the ideology of Jawaharlal Nehru and it represented some kind of consensus among the political elite. This ideology, called in India by the name of secularism, drew heavily on the western liberal heritage to argue for a separation between religion and the ideas that governed public life. This ideology never described the actual culture of political practice in India where a religious idiom and imagination had always been very strongly present. But so long as the national leadership lay in the hands of a tiny elite reared in and respectful of the British traditions of politics, the everyday religiousness of Indian political culture could be kept separate from the decision-making boards of the government. The custodian nature of this elite was reflected in the unity of the Congress Party in which Nehru always remained a Bonapartist figure.

The combination of demography, democracy and political growth in India has now ensured that the political elite is no longer tiny. There are no Bonapartist figures in India today. Nehruvian secularism, a close cousin of western liberalism represented now by Marxists and the left-liberals in India, is on the defensive (remember Salman Rushdie's character talking about the battle lines?).

Why this has happened will require a different analysis. But it should be clear from the above that the problem of competitive and official constructions of ethnicity is a feature inherent in modern civil society. In the best of times, one expects to find lawful, bureaucratic means of resolving these tensions. Even then, the mobilisation of ethnic sentiments would always risk spilling over into racism in public places as the experience of the Australian Muslims during the Gulf war would confirm. There are, however, other times in history when bureaucratic solutions lose their appeal. The difference here is not due to a total opposition between fascism and liberalism as political philosophies. The difference here is in historical contexts. Imagine the conflict between the Bengali-Muslim sense ethnicity and Pakistani nationalism in what was, before 1971, East Pakistan. Clearly, a model of pluralism that recommended that all signs of cultural difference be matters of private belief, became untenable in that situation. Kashmir today, for many, would represent a similar situation. The point is, as I have argued, the very structure of modern governmentality carries with it the seeds of ethnic bloodbath. Whether the seeds will ever germinate is a matter of the particular moment of history one inhabits. This is not a counsel of despair – but it is a plea for our political analysis to be informed by a larger sense of irony.

Advocating the cultivation of a sense of irony about the civilising narratives of modernity does not imply political passivity. The relationship between philosophical positions and political action is seldom straightforward. For, (a) there is no alternative to action, we are condemned to act politically

in this world, which we want to or not, and (b) the subject who acts, and is mobilised to act in the face of events, is more than an intellectual-philosophical subject. Action involves emotions, memories, tastes, feelings, will and values – and these things have histories over which we have much less control than we have over our consciously thought-out philosophical positions. Whatever my theoretical understanding today of the problematic histories of practices named 'sati', 'female infanticide', 'human sacrifice' and 'thagi' – to name four names by which British colonial discourse condemned 'Indian' (yet another name) civilisation – I have been irreversibly brought up by the histories of my childhood, education, socialisation (all of them influenced by British and nationalist critiques of Indian society) to be revolted by the practices that these names seek to describe (always inaccurately). How, in what mode of action, this revulsion will express itself depends on particular situations and the opportunities I read them as presenting.

What, then, is the relationship between this critique and political or state policies that might be put in place to combat racism under conditions of modernisation? First, this critique is about the limits of policy-making under present institutional arrangements. I have argued that, given the connection between governmentality and measurement, both the modern nation-state and civil society necessarily set up certain competitive structures of identity through the very distributive processes over which they preside. The question, 'distribution among whom?',always takes identities for granted. Identities here are not seen as porous. In fact, identities are not measurable or enumerable except on the assumption that their boundaries are abrupt and not vague. In the language of distributive justice, identities represent at any one point of time some kind of narrative consensus in which everybody or every group knows who they are, and this knowledge is shared by the institution that administers well-being. In other words, the existing models of modern political and economic institutions handle the question of cultural 'difference' in identity precisely by fixing and freezing such differences into divisions that are not permeable – a Hindu cannot be a Muslim – so that they are amenable to measurement and enumeration. Even if we moved from the idea of allocative justice to that of procedural justice in the sphere of distribution as John Rawls did in his classic book *A Theory of Justice* (1971), we would still have no way of handling differences in identities. Rawls' search for "justice as fairness", as readers of that text will remember, led him to posit an "original position" (a perspectival position, really, as he himself explains) in which individuals met without any conception of their social or class locations – that is to say, as humans from whom all differences had been abstracted away.[12]

Even Leftist intellectuals who try to modify Rawls in order to infuse a more self-consciously political life into his theory, find it difficult not to universalise a distinction that is historically very particular, that is, the distinction between 'public' and 'private'. Chantal Mouffe's attempt to move away from the Rawlsian position of holding on to the idea of an original rational agreement and to ground 'democracy' in a permanent state of disputation (since there cannot any longer be a "single idea of a substantial common good"), is instructive in this regard. Pluralism here is seen as possible on condition that the political is defined around a minimum shared agreement; that "the principles of the liberal-democratic regime qua political association: equality and liberty" be defined as the "common political good". As Mouffe clarifies:

> a liberal-democratic regime, if it must be agnostic in terms of morality and religion, cannot be agnostic concerning political values since by definition it asserts the principles that constitute its specificity *qua* political association, i e, the political principles of equality and liberty.[13]

Where, then, will be the place for 'morality and religion' in this (post)modern, socialist idea of liberal-democratic politics which accepts disputation as a foundation for democracy? Or for anything else that was not part of this minimum shared political good? Mouffe is clear: these ideas will exist as 'private' belief, the sphere of 'privacy' implicitly defined in such a way as to be incapable, by its very definition, of endangering the institutions that embody "the political principles of equality and liberty".[14]

What else can an Indian intellectual do but experience a sense of irony at what European political theory offers us? On the one hand, there are the actually existing institutions that administer our lives both in India and outside. The very administration of (ethnic) identities by the actually-existing civil-political institutions needs, as I have shown, the same fixed, discrete categories that racists of all colours use. The only difference is in their idioms – bureaucracies use a certain impersonal language while racist mobilisation in public life involves an explicit use of emotions as well, but this difference is superficial and depends on the historical context. Governments, in moments of crisis, will use both. On the other hand, critics of these institutions, whether arguing from a purely liberal position of a Rawls or a postmodernist, socialist position of a Mouffe, cannot but resurrect the model of a human being who holds firm a cultural distinction between the public and the private, as a condition for tolerance and pluralism. But is this human being universal? Is this human being universal even in the west? Does 'political emancipation' (I borrow the expression from young Marx's essay 'On the Jewish Question') require us to universalise the experience and skills of a particular group in modern European history? Do we all have to become humans who are able to objectify their relationship to the supernatural into stateable 'beliefs' and who are able to categorise these 'beliefs' as 'private'?

The politics of being human are different between cultures and within cultures. We are not impervious to one another but that does not mean that the differences are not real. Some people in India possess the modern sense of privacy as it has developed in the history of the middle classes in the west. Many do not. The importance of kinship in Indian society suggests other paths of social change. If we swallowed a theory, hook, line and sinker, that made tolerance and pluralism contingent on the idea of 'private belief', we would only move further away from our social realities than Rawls does from his by his theoretical manoeuvres. The writing of Indian history then has to subscribe to two struggles. One is to document and interpret for contemporary needs the different practices of toleration and pluralism that already exist in Indian society, practices that are not critically dependent on the universalisation of the public/private distinction. The other would be to help develop critiques of the already existing institutions and their theoretical assumptions, for the struggle against the murderous and self-proclaimed 'Hindus' of today must, in the long run, also be a struggle for new kinds of political and economic institutions for the management of public life – institutions that do not require for their everyday operation the fiction of cultural identities with fixed, enumerable and abrupt boundaries. Nobody has to blueprints for such institutions, though we know that two of the finest products of Indo-British cultural encounter of the 19th century, Gandhi and Tagore, experimented with both facets of this struggle at different moments of their lives. If cultural and other kinds of differences are to be taken and lived out seriously, and we want to live in a world where particular developments in the cultural histories of European middle classes do not have to function as models to which all politics of being human must aspire, then we also need institutions that can handle the fuzzy logic with which identities are built. The existing institutions in charge of producing and administering prosperity, cannot do that.

Notes

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1 Ashis Nandy's work has been pioneering in this respect but one can mention Veena Das, Bhikhu Parekh, T N Madan and others. See, for example, Ashis Nandy's *The Intimate Enemy: Loss and Recovery of Self under Colonialism*, Delhi, 1983, and *Traditions, Tyranny and Utopias: Essays in the Politics of Awareness*, Delhi, 1987; Veena Das and Ashis Nandy, 'Violence, Victimhood and the Language of Silence' in Veena Das (ed), *The World and the World*, Delhi, 1986, pp 177-95; Bhikhu Parekh, *Gandhi's Political Discourse*, London, 1989.

2 See Lata Mani, Vivek Dhareshwar and Mary John in James Clifford and Vivek Dhareshwar (eds), *Travelling Theories, Travelling Theorists*, Santa Cruz, 1989.

3 Arjaz Ahmad, *In Theory: Classes, Nations, Literatures*, London, 1992, pp 192-93, 330n22.

4 Sumit Sarkar, 'The Fascism of the Sangh Parivar', *Economic and Political Weekly*, January 20, 1993. See also Tom Brass, 'Away with Their Wor(l)ds: Rural Labourers through the Postmodern Prism' in *Economic and Political Weekly*, June 5, 1993.

5 Sumit Sarkar, 'The Fascism of the Sangh Parivar', pp 164-65.

6 See the excellent discussion in Achin Vanaik, 'Situating Threat of Hindu Nationalism: Problems with Fascist Paradigm' and Partha Chatterjee, 'Secularism and Toleration' in *Economic and Political Weekly*, July 9, 1994, pp 1729-48, 1768-77.

7 W E B DuBois, *The World and Africa*, New York, 1965, p 23, cited in Roslyn W Bologh, *Love or Greatness: Max Weber and Masculine Thinking – A Feminist Enquiry*, London, 1990, p 38.

8 See the discussion in Pierre H Boulle, 'In Defence of Slavery: Eighteenth-Century Opposition to Abolition and the Origins of a Racist Ideology in France' in Frederick Krantz (ed), *History From Below: Studies in Popular Protest and Popular Ideology*, New York, 1988, pp 219-46.

9 Cited in Talal Asad, 'Ethnography, Literature, and Politics: Some Readings and Uses of Salman Rushdie's *The Satanic Verses*', *Cultural Anthropology*, Vol 5, No 3, August 1990, p 243.

10 Klaus K Klostermaier, *A Survey of Hinduism*, New York, 1989, p 412.

11 Georg Wilhelm Friedrich Hegel, *The Philosophy of History*, translated by J Sibree, New York, 1956, p 161. See also the discussion in Ronald Inden, *Imagining India*, Oxford, 1990, pp 69-74.

12 Hegel, *History*, p 163.

13 V S Naipaul, *India: A Million Mutinies Now*, London, 1990, p 420.

14 Romila Thapar, 'Imagined Religious Communities? Ancient History and the Modern Search for a Hindu Identity', *Modern Asian Studies*, Vol 23, No 2, 1989, p 219.

15 Some of the unfortunate consequences of such standardisation in post-colonial India have been recently traced by Madhu Kishwar in her essay 'Codified Hindu Law: Myth and Reality', *Economic and Political Weekly*, Vol XIII, August 13, 1994, pp 2145-61.

16 Our eyes have been opened to these aspects of 'modernity' by, among others, the pathbreaking works of Michel Foucault. My particular observations on India owe a lot to the pioneering researches of Bernard Cohn and to the illuminating work of Richard Smith, Arjun Appadurai and Carol Breckenridge, Nicholas Dirks, Rashmi Pant, N G Barrier, Gyan Prakash and others.

17 Ian Hacking, *The Taming of Chance*, Cambridge, 1991, p 24.

18 See Michel Foucault, 'Governmentality' in Graham Burchell, Colin Gordon and Peter Miller (eds), *The Foucault Effect: Studies in Governmentality*, Hertfordshire, 1991, pp 87-104.

19 T H Hollingsworth, *Historical Demography*, London, 1969, p 78.

20 See Kenneth W Jones, 'Religious Identity and the Indian Census' in N G Barrier (ed), *Census in British India: New Perspectives*, Delhi, 1984[?], p 74.

21 Gyanendra Pandey's book, *The Construction of Communalism in Colonial India*, Delhi 1990, Chapter 7, contains a fine analysis and history of this word.

22 Marc Galanter, *Competing Equalities: Law and the Backward Classes in India*, Delhi, 1984, p 130.

23 Ian Hacking, 'Making Up People' in Thomas Heller, Morton Sosna, and David E Wellbery (eds), *Reconstructing Individualism: Autonomy, Individuality, and the Self in Western Thought*, Stanford, 1986, pp 227-28.

24 Hacking, 'Making Up People', p 227.

25 Sudipta Kaviraj, 'On the Construction of Colonial Power: Structure, Discourse, Hegemony', unpublished paper presented to a conference on 'Imperial Hegemony', Berlin, June 1-3, 1989.

26 See Eugene F Irschick, *Politics and Social Conflict in South India: The Non-Brahmin Movement and Tamil Separatism, 1916-1929*, Berkeley, 1969, App 1.

27 Jones, 'Religious Identity', p 91.

28 Lucien Febvre, '*Civilisation*: Evolution of a Word and a Group of Ideas' in *A New Kind of History: From the Writings of Febvre*, Peter Burke (ed), London, 1973, pp 219-57.

29 Rajkrishna Bandyopadhyay, *Neetibodh*, Calcutta, 1858, pp 12-13.

30 Talal Asad, 'Multiculturalism and British Identity in the Wake of the Rushdie Affair' in his *Genealogies of Religion: Discipline and Reasons of Power in Christianity and Islam*, Baltimore, 1993, pp 239-68.

31 Personal communication from Ashin Das Gupta, formerly director of the National Library in Calcutta.

32 See John Rawls, *A Theory of Justice*, London, 1976, pp 137-38. Rawls, as is well known, has both modified and presented reinterpretations of his original theory in subsequent publications. A good overview of the debate around Rawls is available in Chandran Kukathas and Philip Petit, *Rawls: A Theory of Justice and Its Critics*, Cambridge, 1990.

33 Chantal Mouffe, 'Rawls: Political Philosophy Without Politics' in David Rasmussen (ed), *Universalism vs Communitarianism: Contemporary Debates in Ethics*, Cambridge, Massachusetts, 1990, p 223.

34 Ibid, p 222.

Politics of Diversity

Religious Communities and Multiple Patriarchies

Kumkum Sangari

This essay reviews the current debate between maintaining religion-based personal laws and instituting a uniform civil code in the context of gender inequality and Hindu majoritarianism. It challenges the assumptions on which positions that advocate legal pluralism and defend personal laws have based their case.

The essay argues that prevailing notions of community are bureaucratic, reductive, static and essentialist and defeat their own declared objective of maintaining social pluralism, critiques the enmeshing of religious community with personal laws as a form of new orientalism that is both patriarchal and ideologically laden, and argues against positions advocating reform of personal laws by state or community.

The author critiques ideologies of cultural diversity that rest on assumptions of discrete homogeneous communities, on religion as the singular axis of diversity, on a conflation of religion, culture and patriarchies, and on a confusion of social disparity with diversity, as all being incapable of reckoning with existing cultural diversity.

The concluding section of the essay argues against the perception of religion or religio-legal systems as the sole determinant of patriarchies. Patriarchies cut across all primordial principles of social organisation, call into question the very principle of demarcating communities and personal laws that prevails at present and cannot be fought from 'within' by an identitarian politics. Multiple yet overlapping patriarchies should underpin new common laws that take into account existing axes of social differentiation even as they transcend such differences in the realm of rights. New laws must encourage a genuine religious plurality and be based on both the differences and overlaps between existing patriarchies. Inalienable rights for all women must be established while a new type of legal particularism should be instituted responding to the situational specificities of patriarchal arrangements.

[The paper is published in two parts. The first part appeared last week.]

IV
Multiple Patriarchies

(19) Plural Patriarchies

THE plurality of patriarchies is then a facet of social disparity, which is entangled with as well as produces diversity; it has been sustained and partly generated by combinations of legal pluralism, religious pluralism and the customary domain. Yet depending on the wider structures obtaining in a specific conjuncture, each one of these – legal pluralism, religious pluralism, customary domain – produces different 'clusters' which may either overlap but not fully coincide, or, work against, even undercut each other. For this reason, it is the totality of patriarchal arrangements, in their differences and overlaps, rather than heterogeneity *per se*, that should be approached in order to pose the question that precedes any attempt to make common laws for women: are there separate patriarchies governing women of each caste and each religion?

The nature and existence of plural patriarchies in India has barely been theoretically addressed and here I can only address it in an indicative manner. In the past, caste division, divisions of labour, the coexistence of tribal and agricultural modes of production, of matrilineal and patrilineal systems, and their complex articulation with regional histories including the formation of religious sects, have been significant factors in the crystallisation of differing patriarchies.

Many of the overlaps and differences, especially those that have functioned around the axes of caste and class, are in fact structured and not mere historical accidents or ideologically neutral. The legal pluralism that sustained multiple patriarchal arrangements could at times itself be an aspect of sought hegemonies. The brahminical refusal and/or inability to universalise a single patriarchal mode in ancient India is a case in point. There were several difficulties. Different patriarchies already existed by virtue of different modes of production, regional specificities and cultural differences. New schools of law continued to emerge, conquest had to respect custom, while brahminisation itself was a two-way process of acculturation and assimilation. Varna divisions not only made for exclusiveness[11] but created other complications. There was a partial, erratic, quasi-functional connection between lower caste women's 'freedom' and upper caste women's lack of it. This cannot, however, be understood merely in terms of functionalism, conspiracy or caste enclosure – but rather that in these early centuries patriarchal arrangements would have a more directly discernible relation to the group's relation to the means of production. The sheer lack of inheritance, property and corollary lineage concerns would produce patriarchal systems different from that of upper castes; so too would the looser attachment of hierarchically lower groups to the written word, orthodox religion and political power.[12] There was a related difficulty, that was either an inhering contradiction in or a by-product of caste stratification and its divisions of labour: women of all varnas could not be clubbed together under the same set of patriarchal norms (for example in punishments for adultery or in matters of legitimacy and lineage), because this would entail taking away access of the higher varnas to the labour and sexual services of lower varnas.[13] This necessity meant that, either then or in succeeding centuries, brahminisation itself could not afford to universalise a patriarchy, and different patriarchies coexisted granting different degrees of sexual access to upper and lower castes, as well as access to remarriage and a 'public' world of work to lower caste women. As a result the Smritis prescribed or allowed for discrete as well as overlapping or intersecting patriarchal arrangements. For instance marriage was sacralised for upper castes but largely non-sacral for the lower; or closer to home, caste differences between wives not only determined hierarchy within the family but also unequal inheritance for their sons. In their textual contents, in their proclaimed distance from customary law as well as in their frequent recognition of different co-

existing customary laws, the Smritis partook in a what was effectively at once a practised and a structured diversity.

It is not surprising that to date most attempts at uniform laws have been unable to accommodate these differences in patriarchal arrangements without adopting a bias (favouring a particular school, set of provisions or tendency in brahminical texts, or even particular customary laws). The question is why should a uniform law even try to accommodate this type of practised yet structured diversity? Each attempt at uniformity till now has indeed taken away freedom from some women while giving them to others. An unsentimental appraisal of the politics of diversity reveals that a major reason for this has been the fact that different patriarchal arrangements distribute protection, entitlements and oppressions differently in terms of class, caste, region and religion. Some of these freedom may be more apparent than real, while some may be accompanied by other patriarchal controls.[114]

(20) On Textual Differences

If structured diversity was a marked feature of caste differentiation, the differences between patriarchal arrangements of religious groups have other structuring logics. Diversity here may be partly a product of discrete religio-legal systems; these are, however, subjected to a continuous restructuring in the customary domain and by class imperatives that produce sets of practices which are both common and different. However, the vaunted 'separateness' of these patriarchies is partly an ideological effect. There are several important questions here that are difficult to unravel in the abstract. So I will start with suggesting some lines of comparison between past and present patriarchal arrangements governing Hindu and Muslim women in the north.

Let me begin with a workable generalisation. In the widest sense, given the plethora of schools, commentaries and interpretations, classical Islamic laws relating to women display structural and ideological similarities with pre-medieval brahminical laws. Ancient or pre-medieval brahminical written law – again taken in its widest sense, given the multiplicity of schools, texts, commentaries and interpreters – were centred on sets of entitlements and obligations whose nature and content was determined by a hierarchical and largely agrarian social formation as well as by displacing and imbibing earlier patriarchal forms. Classical Islamic law was distinct in two respects: it instituted claimable rights and contract, that governed property and marriage and underwrote the elaborate provisos for women's maintenance. Both concepts were related to the selective incorporation of Roman law and the influence of precapitalist mercantile contract; further, the crystallisation of written Islamic law in its initial moments was linked to changes in family forms and a movement away from tribal and wider kinship based forms to narrower family forms – taking the extended family as its basic unit, it partially released women from pre-Islamic, tribal patriarchal forms but partly retained these.[115]

Even in these two areas of greatest difference, there are striking points of similarity with brahminical law both in theory and in the adjacency of social practices in north India. The greater individuation of women in Islamic law, though their share was less than that of men, provided for an absolute right to own property as heirs to their natal family, as recipients of mahr from the husband (this made women contracting parties in the marriage contract and is not to be confused with brideprice which signifies 'sale'), and as heirs in the husband's estate; it enabled them to 'independently' manage their share, which need not necessarily be melted into a marital joint stock, thereby producing strong potentials for bilateral devolution. In theoretically much more dilute ways, forms of limited bilateral devolution through 'stridhan', limited entitlement to specific forms of property, to vari, and to maintenance can also be found in the brahminical repertoire and its customary variants. The distance between the two systems was reduced in another way. The theoretical possibility of greater individuation for women in Islamic law has been offset in practice by its dilution. These practised denials of women's access to property and inheritance found and still find friendly counterparts in the practice of propertied patrilineal non-Muslims in northern India, and can make for an ideological rapprochement with both brahminical laws and common social practices.

The second major distinction is that of contractual marriage. As an institution, marriage ('nikah'), though part of the sacred essence of the Prophet's teaching and a highly religious covenant, is a civil contract. As such, while it made women party to the marriage agreement, and in some cases allowed them to add provisions limiting the husband's extensive legal control,[116] the contractual element favoured men in most respects; male initiated divorce remained easy despite the attempts by lawmakers to delimit it.[117] Nikah was also intended to be a lifelong, permanent bond with rights and duties.[118] The contractual element in marriage in classical Islamic law has been overplayed at the expense of its religious character, in the attempts to build an absolute contrast with Hindu sacramental, indissoluble marriage. However, a closer look at brahminal law produces a different picture.

Brahminical legal texts stipulated an indissoluble sacramental marriage for upper castes which functioned simultaneously as an ideological rationale for patriarchal domination, but they tacitly conceded that marriage was an institution with a material base and also encoded certain contractual elements such as correlative rights and duties, and some stipulations for dissolution. These elements are most notable in the *Arthashastra* which provided more possibilities for dissolution of certain categories of marriage for men and women, and some limited recourses for women including remarriage for deserted and widowed women; marriage itself, especially polygamous marriage, was entered into a more explicit structure of monetary and compensatory provision (as for earlier wives). These elements are muted in the *Smritis* which have an especial investment in defining marriage as indissoluble; but even they allow women in a few special circumstances (e g, if the husband was missing for a number of years) to regard a marriage as terminated. However, though marriage was also indissoluble for men, there are many more textual clauses stating permissible grounds for male desertion and annulment of marriage as well as sanctioning male rejection of 'bad' wives: the *Manusmriti* gives husbands full right to desert and/or dispossess wives who quarrel, do not respect them or hate them. One conclusion that could be drawn from this is simply that marriage was more sacramental for women, and such contractual elements as existed favoured men. Further even though these texts did not legally provide 'Hindus' with the male privilege of (excesssive) divorce, this existed anyway as a social privilege, indeed as the generalised privilege of neglecting or deserting wives fairly unilaterally. Finally sacramental marriage was restricted to upper castes, and numerous types of divorce prevailed, with de facto rights for men and women (in different and varying proportions), along with easier remarriage, among lower castes.[119] So while types of extra-judicial divorce were legally permissible under Islamic law, it was customarily available to almost all but upper castes.

Islamic religio-legal texts have not been univocal about polygamy. Further, the polygamy practised by Muslim men was fully matched if not outdone by that of upper caste /class men. Polygamy was common to most ruling groups, often tied to male status and gave men legal access to a number of women in marriage, a polygamy without the numerical limit imposed by Islamic law. In addition, they also had access to numerous women in structured yet non-formal cohabitation and/or secondary marriages.[120]

Further, in different languages brahminical and Islamic laws recognised irregular marriages, and tended to limit the liability of men to 'proper' wives without eliminating their access to other women. Mutah or irregular marriage is comparable to secondary marriages in brahminical legal texts. The lack of rights for women in irregular marriages are also comparable.[121] In fact both sets of scriptures and law books recognise, through description and classification, a number of living arrangements and types of marriages, even when they proscribe them. Both are caught in the logics of existing reality that may not match with prescriptive desire.

The signal distinctions between brahminical and Islamic laws – greater individuation, contractual marriage, male access to numerous women and unilateral male divorce – either diminish on closer examination of the laws or melt in practice. There are also more obvious ideological similarities. As legal subjects, women are primarily envisaged as non-productive, confined to reproduction and domestic labour in the marital home, construed as dependant wives, mothers, daughters, with little custodial or guardianship right over children, dependant on male provision; inheritance is patrilineal and monogamy is the rule for women; the arena of their claims to entitlement or right is predominantly the 'negative' one of maintenance, perpetuating a dependence that could be exploited to enforce obedience, as well as restricted to the familial and contingent on 'behaviour'. Husbands are not bound to give maintenance if the wife is improper, disobedient, unchaste. There is no dearth of misogyny centred on a supposedly unbridled female sexuality in either brahminical or Islamic texts. Both place restrictions on women's movement outside the home, mete cruel punishment to erring and adulterous women while the Smritis prescribed severer punishments for women's lapses. Both are more stringent about enforcing caste and/or religious boundaries when a woman's choice of husband is at issue, in part because they assume that the husband's caste and religious denomination will prevail over that of the wife.[122]

Within these broad similarities there are of course many different ideological registers, differences in practice, institutional contexts and contests, and different repertoires of the textual and customary. In fact both legal systems had at some levels a dynamic relation with custom[123] and social change, as well as provided ways of rationalising deviance and lack of strict compliance with precepts in moments of crisis ('apadkalin dharma') and moments of necessity ('fasad-al-zaman'). Both recognise a number of patriarchal practices as morally reprehensible but legally valid – law and morality are not fully integrated in either. Despite the difference between the revealed and not-revealed, Islamic law and brahminical law have similar methods of legitimation, ranging from precept, moral axiom, exhortation, custom, moral duty to sacred law, while their ultimate purpose is to secure divine favour here and hereafter.

In combination with the aforementioned ideological and structural similarities, social conditions conducive to patriarchal overlaps or mutually congenial patriarchal arrangements existed before the inception of modern law. (This fact is obscured by the historically more recent reconstitution of the 'Hindu' and 'Muslim' as separate and competing patriarchies. If ruling groups threatened each other's women it was *within* broadly shared patriarchal and proprietorial codes.)

The self-definition of elite groups partly rested on possessing different and tighter patriarchies; in this too there was little structural difference between the two denominations and often substantive similarities. Upper class/caste groups were cross-denominationally united in construing women as status markers, in the seclusion of their women, parental control over marriage, the practice of child marriage and unanimous in their contempt for lower caste groups. Though in theory, contractual marriage as defined by Islamic law made it easier for widows and divorcees to remarry, in practice there was not that much intermarriage. For instance, for the northern ashraf, in de facto terms, Muslim marriage became more indissoluble than contractual, widows were seldom remarried, while women were often denied inheritance. Ironically, but explicably, some of the patriarchal overlaps are produced through a process of the common infringement of customary entitlements and textual sanctions, through common denials and the wide gaps between prescription and practice. This is a question I will return to.

Deep similarities existed between lower caste/class artisanal and labouring groups too, among whom there was often a great deal of denominational ambiguity both in nomenclature and in social practices.[124] Thus, class for class, local coexistence and interaction produced common customs, practices, and interpretation of legal texts. Intermarriages, and what I have elsewhere called 'incomplete conversions' produced carryovers and continuities, especially in customs, both in latent and explicit syncretic formations.[125]

The inception of modern class formation accompanied by newly defined personal laws and community claims in the 19th century produced a new axis of political differentiation but they also added to this long history of overlaps, that I will rapidly enumerate. There were already notable similarities in "domestic habits and institutions".[126] Modern processes of class formation in part produced mirroring community claims and reform agendas invested in simplifying rituals, rationalising dowry and so on. The political economy of capitalism overdetermined by colonial rule at one level produced an adherence to newly constituted 'traditional' enclaves of which patriarchies were one. The domestic ideologies obsessively produced across denominations were all combinatoires of emerging companionate and nurturant bourgeois ideologies with earlier pre-capitalist patriarchal ideologies and arrangements. The ashraf and the upper/middle castes invested in a common model for status indication and for upward mobility with a complementary prescribed set of 'core' patriarchal arrangements that involved seclusion of women, dowry, female literacy leavened by chastity, piety, efficient domestic management, good wifely service, and an exorbitation of male tutelage.[127] Ironically their desire to mark class/caste boundaries and particularise communities through domestic ideologies produced women as similar 'types' of class subjects. In a further irony, class imperatives – that inhered in secluding women, withdrawing them from 'dubious' public places and the near compulsive proscription on associating with lower caste/class women in all but tutelary or supervisory capacities – undercut the production of broad-based unified Hindu or Muslim communities.[128] Male reformism was not based on a concept of equality or rights but on improving women's status and reformulating patriarchal arrangements in ways that were largely based on 'entitlement' with its overt morality of women's dependence, and covert intent of sexual surveillance and patriarchal control; both safeguarded their common patrilineal customs regarding devolution of agricultural land.[129] It was progressive women's organisations that not only raised the question of rights in the 1930s but stressed the common problems of Hindu and Muslim women and resisted their division into communal constituencies.[130]

Finally new types of commonalities based on urbanisation and the secularisation of certain areas of social life also emerged in the 19th century and continue to do so. Contemporary studies suggest that similarities regarding education, age of marriage, seclusion, prescribed patriarchal behaviour, are predicated on the major correlates of class, region, urbanisation, not on community or religious orthodoxy.[131] The political economy (including the market) that shapes and intersects with patriarchies regardless of religion, is producing new

grounds and forms of similarity, in combination with customary practices that continue to level many textual differences. Dowry (and related crimes) cut across religious denomination while the practical logics of inheritance usually supersede denominations. Dowry in the shape of money and jewels is being substituted for a share in property with or without women's consent in Muslim families. Brothers may not give them a share in the father's property; women may never claim it; or this may be claimed and used by the husband/sons rather than the woman. Considerable pressure may be exerted to sign over inheritance to brothers at the time of marriage. Mahr may be a verbal promise or a token amount paid at marriage, the rest may never be forthcoming.[132] Entitlement to support from the natal family, important in the case of breakdown of marriage, comes at the identical cost of foregoing rights.

Even more significant is the common refusal to implement even the personal laws, especially provisions for maintenance and inheritance. The way in which the contractual rights of Muslim women are undercut in practice is not particularly different or distinguishable from those of Hindu women – there is a similar spectrum of discriminations. The gap between textual aspects of Muslim personal law and practice is simply analogous to as well as runs parallel to the gap between Hindu personal law and social practice. The reformed image of Hindu law can be sustained only because it is barely implemented and because of women's enforced consent in not claiming their legal rights or property. (If all women were able to do so Hindus would lose their complacent and progressive air.) Muslim women did not and do not live in some monolithic or isolated world of Muslim personal law but in a sphere of customary variation and denial like any other women.[133]

The representations of 'Hindu' and 'Muslim' patriarchal arrangements as absolutely different, partly produced and upheld by several projects of Hindu and Muslim legal reform, not only have distinct ideological locales but also distinctly pernicious effects. For instance, the contrast between a sacramental Hindu and a contractual Muslim marriage that emerged in 19th century ideologies was overplayed on both sides. Muslims emphasised contract since it implied that Muslim women had more rights and made them less vulnerable in the reformist colonial gaze than Hindu upper castes with their backward sacramental marriages. This became a basis for claiming an inherent modernity and progressiveness for Islamic laws (rather than a capacity for modern interpretation), forgetting that in their initial textual forms they were not premised on a concept of gender equality. Hindus obsessively reiterated sacrament, partly in its new colonial definition, for a number of reasons: Hindu women could then be part of a sacrificial complex, occupy higher moral ground, be distinct from 'western' and Muslim women. This was a covert mode of caste differentiation, an attempt at universalising upper caste marriage since the majority of lower castes had dissoluble marriages, as well as a way of defending upper caste male patriarchal privileges. The sacrament bound women more firmly than men, and since it could go so far as to legitimate a widow's domestic labour or her immolation, it made at once for Hindu male reformist guilt and chauvinist exceptionalism.[134] The Hindu Code Bill introduced divorce but retained sacrament in a delimited form as 'ritual' marriage; its ambiguity has led both to claims for a modernised secular law and to a marked reluctance to give up the ideology of sacrament.[135] It has fed competitive, self-congratulatory and defensive logics: Muslims claim that the 1950s reformed Hindu personal law imitated the modernity of Islamic contract; Hindus claim that Muslim personal law must now imitate the modernity of reformed Hindu law!

A second layer in the production and encashment of religious difference was in the frequent casting of 19th century reforms as return, restoration and breaks with the customary; rehearsing British administrative desires to restore a legal ur-text from antiquity, Hindu reformers turned to 'pre-Islamic' laws while Muslim reformers turned to 'pre-Hindu' laws. Reforms at one level were mimicing project of religious differentiation, with each seeking freedom from the 'other's' corruptions through identical methods. Since the contractual horizon of Islamic law exceeded that of any other in India, there was a legitimate case for protesting its dilution in practice. However, the customary was misperceived on both sides as merely a site of Hinduisation and Islamisation[136] – that is, of the 'fall' – whereas it was a mutually shaped and shared realm of patriarchal consensuality.

Such a persistent emphasis on religio-legal differentiation has had several ideological effects. It has privileged religious texts; built religious contrasts between transhistorical textual systems instead of analysing contemporary social overlaps and differences. The exorbitation of texts has systematically obscured how far similar or common patriarchal practices can be theoretically governed by different religio-textual laws. It has instituted religion as the singular determinant of patriarchies. It has artificially transposed denominational differences upon patriarchies – tacitly positing a 'Muslim' and a 'Hindu' patriarchy. It has established a politics of mutual blame for patriarchal practices that serves to repress the common infringement of personal laws. It has rolled back feminist politics based on an understanding of overlapping patriarchies and the patriarchal consensualities that bind women into regional clusters and mute religio-legal differences. Most of these ideologies of difference have trickled into the defences of (and communal attacks on) personal laws. Some arguments that uphold the 'autonomy' of personal law and internal reform within a minority, thus rest on an ideological set of interrelated assumptions: Muslim women appear to be oppressed by Islam and personal law, religion and patriarchy appear to be absolutely identical, Muslims are decontextualised as living in their 'own' world, a world sustained by religious differences alone. In fact, much more than Muslim personal law goes into making up the oppression and inequality of a patriarchy, and all of that is at work for non-Muslim women as well.

(21) Overlapping Patriarchies and a Common Politics

If the area of overlap between patriarchal arrangements is wider than the area of differences instituted by religio-legal systems, and produced by the ground realities of social status, caste, class formation, capitalism, division of labour, political and material interests, can these be seen as discrete patriarchies defined by religion? The ideological pressure of religious differentiation tends to repress the nature of patriarchal arrangements and the overlaps between them.

Patriarchies function in three concurrent ways – systemic, shared, and differential – and each of these cuts across religious boundaries being constituted on a number of primordial and non-primordial lines. The presence of multiple patriarchies involves an analysis of specific differences and similarities – their production, degree of structuration and content. The differences in types of oppression are not part of a realm of pure cultural diversity but differences between patriarchies, that may be more or less structured, and entangled with an even wider spectrum of social differences. Given these multiple axes of social difference, and the fact that the existence of several religions is only one amongst many grounds for distinct patriarchal arrangements, there is no reason to privilege religions above other features.

Further, many of these patriarchies, marked by overlaps and distinctions, have existed as much in co-operative relationships as they have functioned as marks of difference. The very presence of diverse patriarchies has provided a space for contention within the 'same' denominations in the struggle for

upward mobility (as between upper and middle castes); it has also been a space for contention between denominational groups, accentuating male bonding 'within' groups and male rivalry over patriarchal privileges such as multiple access to women; it has produced cross-caste and cross-denominational male bonding as well as worked to enforce status and regional divisions among women.

Patriarchal arrangements are a historically changing yet systemic product of a complex articulation of factors in which religion and religio-legal systems are significant but not sole or primary determinants. Religions as bearers of patriarchal ideologies do structure patriarchal arrangements at the level of prescription and practice. Further, the reproduction of patriarchies has till now been crucial for the reproduction of religious groups or 'communities'. However, insisting on the primacy of religion can be a careless replication of communal positions or a capitulation to the gross generalised claim of orientalists and indologists that religion is a way of life in the 'third world', thereby subsuming reproduction, labour, inheritance and personal relations into it. In fact, even the disappearance of religions will not spell an end to patriarchies since so much else is involved.

I can argue this from another direction. My own assertion of the value of religious fluidity or syncretism could barely address the question of patriarchies. It could only address the falsity of 'community' constructs, of hard and fast divisions on religious lines, and reassert the presence and importance of other forms of collectivity. That is, religious fluidity has the capacity to challenge only one of the theoretical rationales of personal laws. Religious fluidity and syncretism may confuse or suspend the orthodox religious rationales of a patriarchy or mitigate the power of religion as a structuring principle of patriarchies: while syncretisms, as a shared fabric of beliefs, can be a source of potential solidarities or bulwarks against communalisation and oversharp differentiation – but these cannot resolve all aspects of patriarchal oppression.

Just as a religion cannot be conflated with a patriarchy, similarly religious pluralism can neither be confused with the existence of multiple patriarchies, since they cut across religious lines, nor can it be seen as a solution to patriarchies. In other words, if religious plurality is understood by abstracting certain features of a social formation, patriarchal diversity is analytically understood by abstracting certain features too, but these are not all the same features, precisely because religions are not identical with patriarchies.

An analysis of patriarchy premised on the autonomy of primordial communities will not get very far. Since patriarchies cut across all primordial principles of 'social organisation, it follows that they cannot be fought from 'within'. A religious community may be ideologically premised on a within and a without, but in existing patriarchies, there are no such 'withins'. Religio-legal texts take effect in contexts and different religions may have the same context. Further, since patriarchal consensualities operate across religions in different region and class determined customary domains, members of each religion may belong to several different sets of patriarchal consensualities. This undoubtedly complicates the already vexed question of challenging patriarchies from within a religious or a religio-legal framework. The nature and strategies of the struggle against patriarchies logically depends on the primacy and particular combination of the structuring agents in a specific conjuncture – capitalism, class, caste, religion.

The overlap of patriarchies across religions is at one level produced in the customary domain. If women gain in the customary sphere *vis-a-vis* textual laws, depending on the nature of these laws, class status, individual circumstance and conjuncture, then those mitigative aspects in customary arrangements can be available to women from any denomination. However, for most women customary rights over certain categories of income and distribution of household resources, etc, are built over time yet remain contingent, situational and without predictable outcomes.[17] The customary then is an area where women may gain or lose.

This overlap thus carries beyond commonality of patriarchal practices into the denials of customary entitlements and existing legal rights as well as in setting up an opposition between such entitlements and legal rights. Custom is the space where the full embodied sociality of religio-legal texts is established. However, since the customary domain can be at once patriarchal and pitted against religious and non-religious, textual and/or statutory legal systems, it can produce patriarchal overlaps and consensual clusters along lines that are different from existing legal pluralism as well as from the legal homogeneity of separate personal laws. Such commonality of customs across religions in turn indicates the wide structuration of patriarchies.

The near universal deferral and infringement of customary and statutory laws of inheritance also suggest that inheritance is primarily a matter of class interests regardless of whether it is bound in secular or religious idioms,[18] and that is why most if not all patriarchies are in a practised opposition to even the inadequate existing laws. Different women may be more handicapped by particular clauses in their personal laws than others but in practice the handicaps tend to even out. In areas related to devolution (e g, dowry) denomination has neither an analytic nor an experiential valence. The retreat into communitarian arguments ignores how much all types of patriarchal arrangements are being reshaped by capitalism. And ignores the importance of analysing the 'fit' as well as the discrepancies between the political economy, differing laws, and the common thrust of discriminatory practices.

Further this gap between custom and law as evinced in customary denials, itself creates not only the space and conditions for overlaps but also for claiming a determinate significance for such 'overlaps'. Customary denials indicate the extent to which women with different religions are living under the same set of patriarchal arrangements. The nature and regularity or otherwise of the gaps between social practices and existing laws can be a way of defining the common areas in patriarchies as well as the operative power of a patriarchal social consensus. Feminism represents one of the breaks in this consensus: as such a more effective resistance may be offered if women unite rather than split across religious lines.

It is debilitating to surrender to the tendency to limit the question of patriarchies to personal laws or the question of social inequality to family matters. It must be reiterated that women are governed not by family laws alone but all other laws, not by patriarchies alone but by the totality of inegalitarian social arrangements. The issues raised by patriarchies extend beyond religion to encompass right to work, employment opportunities, citizen's rights, while a struggle for gender justice extends beyond community or state legislation into the wide social oppressions common to women.

It is precisely these ideological delimitations which make some of the attacks on legal uniformity a disguised attack on equality. The terms of questioning amount not to 'equality with social heterogeneity' but 'inequality with social heterogeneity'. Thus the term 'gender justice,' if one is not careful, can come to mean that women can obtain this in different ways through their reformed personal law. Now it may be possible to obtain 'justice' through different sets of laws, but is it possible to obtain equal rights within a democratic egalitarian framework through these means? Does not social plurality yoked to the personal laws simply hedge if not discard this wider meaning of equality, and settle down comfortably with the sense of having preserved cultural difference?

The very nature of patriarchies thus makes segregationist-particularism absurd for feminists. The sheer existence of multiple but overlapping patriarchies calls into question the very principle of demarcating

rights that is pervasive at present. Feminist collectivities are held together by common analyses of and opposition to patriarchies; a feminist politics has to be based on all aspects of patriarchies – systemic oppression and similarities, structured and unstructured differences. Multiplicity does not imply atomisation precisely because there are as many overlaps as variations as well as because several differences in patriarchal arrangements are structured and structurally related. The multiple identities of persons – familial, class, religious, caste – may exist in significant relation with each other rather than as atomised entities while many of these differences are products of an unacceptable social inequality. Similar patriarchal oppressions can make for unity, but dissimilar patriarchal oppressions can also make for a unity of aims (even as they may demand different oppositional strategies).

The shared nature of systemic patriarchal oppressions, and evolving shared goals alongside different strategies that address the differences of patriarchal arrangements, is only one source of feminist unity. Patriarchies are relational, subject to a wider political economy, occupy different configurations, and are reformulated continuously. That is, there is no historical essentialism available to women. However, because they are related to so many other systemic oppressions, feminists cannot isolate and challenge patriarchies alone but also have to confront all that they are shaped by and embedded in; that is, the very nature of patriarchies requires a thoroughgoing egalitarian project which demands an end to all forms of inequality that women and men are subject to – based on class, caste, distribution of surplus and division of labour. If feminism opposes disparities produced through patriarchal arrangements, it cannot ignore or accept these other disparities. And it is in this wider democratic commitment that another source of feminist unity resides.

The stake in plural politics or overlapping feminisms, is usually based on narrow or sectional self-interest alone since they posit (irreducible) differences in terms of localised self-validating identities without addressing social disparities as a whole.[19] A feminism based on the interests of small groups of women is likely to result in an identitarian, sectarian or re-essentialised politics that allows the wider structures which underpin patriarchies to continue undisturbed.

In Conclusion. Towards New Common Laws

I will conclude with some suggestions about the shapes new laws must neither rehearse nor take as well as the lines along which they should be devised. New laws cannot replicate or be based on the assumptions of personal laws: a dehistoricised definition of religions as sealed, immutable and exclusive, a definition of community rehearsing the bureaucratic rationales of colonial rule and the politically pragmatic compromises of the contemporary state, their necessary coincidence with the homogenising logics of community formation and amenability for exploitative political instrumentalities. If we set out to critique the essentialist hegemonising drives of the nation-state, we cannot usefully do so on the basis of primordial, essentialist religious communities in part engendered by the nation-state, or by jeopardising women's rights – rights that the state itself is reluctant to universalise. It is only by seeking a guarantee for their rights as citizens that women can be empowered to actively challenge and redefine the present contours of the political arena.

As I have shown religious pluralism, syncretism, the customary domain, as well as multiple but overlapping patriarchies call into question the present principle of demarcating communities and their 'rights'. The mobile, contradictory and cross-cutting logics of the process of community formation would in fact be foreclosed or frozen by any further institution of community based laws. New common laws cannot be based on religion or any other type of primordial, birth-bound principle or punitive notion of identity that in practice strengthen patriarchal privileges.

New laws should not be assumed to occupy the same area occupied at present by the personal laws. We have to break down the public and private, recognise that the familial is related to the sexual division of labour and determines women's capacity for waged work, that women's identity rests equally in every sphere of social life. There is no point in dividing up the common areas in the spectrum of oppressions through public and personal laws; this division functions to abstract patriarchies from the wider structures in which they are embedded. The legal classification of 'personal' or 'family' law in areas such as inheritance and succession, adoption and maintenance has to be challenged. To put it bluntly we do not need a singular 'code' that will collect and systematise a complete set of principles to rule family matters. Rather we need to examine the existing relationships between the various laws governing the public and private domain, rethink the categorisation of public and private, and refuse to replicate its prejudicial aspects in new laws. We have to also consider delinking laws affecting women from the modalities of social reproduction of class privilege, patriarchies and communalised religions.

New common laws need not be a duplication of the principles or ideologies of existing laws. They would have to be stripped of all majoritarian and 'Hindu' nationalist assumptions. The legitimacy of new common laws will be based on secular, democratic horizon that seeks justice for women within a wider egalitarian project. As such it cannot be formulated by the state or the BJP, or sought through a consensus of religious communities; it must be formulated through left, feminist, secular, democratic agencies, who entertain a dialogue and seek a consensus on different principles from women of all castes, classes and regions. Common laws can only be made from a self-conscious, strictly non-religious standpoint, which carries a simultaneous understanding of both concrete similarities and differences of patriarchies; as well as of the different relations between religions and patriarchies, of religions being neither sole nor primary determinants of patriarchies, of the limits that religions and patriarchies set on a universalisation of rights, and seeks a universalisation neither of religion nor of patriarchies but of enabling rights. Thus such a standpoint would be relatively non-partisan in individual and collective intentions as well as in seeking a wide ranging democratic definition of new laws. What can potentially unite women is not a uniform civil code but a common understanding of patriarchies and common aspirations, prior to the formulation of new laws.

New laws would have to move in three directions: encourage religious diversity, establish inalienable rights for all women, as well as find ways of dealing with the diversity of patriarchies. That is, not towards a universal principle that takes only their commonalities and flattens them into a 'core' but towards imagining a concretisation of the universal in a way that can take into account both similarities and differences. The ideal of gender equality in the secular projections of a uniform civil code can be recouped in a different framework, one that is not, however, merely a revamped uniform civil code.

As I have tried to show, cultural diversity in India cannot be proclaimed as our civilisational splendour (or worse as a sign of perennial 'Hindu' tolerance) and unproblematically celebrated. Thus the struggle against patriarchies may be pitted against forms of homogenisation, or against forms of heterogeneity, or both, depending on their nature in a specific conjuncture. I hope my argument has managed to indicate that heterogeneity and homogeneity, taken by themselves, are flabby issues. Left, democratic, secular, feminist forces have to sharpen their analyses and talk concretely about types of heterogeneity

and homogeneity, as well as the class, caste, communal and other social relations underlying particular forms of diversity – on qualitative, ethical and egalitarian grounds. A feminist position on diversity has to be principled, at once theoretical and based on the empirical presence and nature of patriarchies. We need to engage in direct ethical argument and critique of specific rights and legal protections, rather than seeing any concept as perennially governed by its origins in 'western' enlightenment reason and/or in an attendant masculinism.

If an understanding of heterogeneity is to be built into laws then we have to ask what type of heterogeneity is at issue and which differences are sought to be maintained. Do they provide breathing spaces? And if not, are they a source of patriarchal oppression or part of structured inequalities (disguised and sold as social plurality) that should be opposed?

The next major question is how desirable forms of diversity can be either maintained, left unimpaired or saved from active erosion by the law. The most plural type of legal pluralism would not be able to match all the plentiful and cross-cutting axes of social diversity; while, as I have tried to show, privileging any one (such as 'religion') involves a denial or suppression of others. At one level, a set of common laws, depending on how they are framed, may be less interventionist than privileging one form of cultural diversity over another. At another level, legal minimalism premised on a few basic laws may turn out to be more helpful than a descriptive\prescriptive legal particularism.[140]

As far as religious pluralism is concerned we need a conception of law that honours and preserves the potentials for healthy fluidity but does not attack or humiliate minorities and remains committed to their right to a peaceful, dignified life. We should develop a perspective on law and legal change that understands that in the near political future there will be – as in the near political past there has been – a contest between the processes and agencies of both fixation and of change, as far as religious beliefs and communities are concerned. We need to imagine laws that cease to be preoccupied with fixity (religious differences and community claims as they exist) and begin to allow for change. That is, laws which honour principles of exit and entry, the individual's right to choose where to belong, existing diversity, processes of change within and between denominations as well as maximise certain types of choice for persons and religious flexibility rather than sealing otherwise elastic boundaries. Indeed the cause of religious pluralism may be better served by not stifling religions with legal definitions as is the case with personal laws, and insofar as they are not patriarchal, by simply leaving them alone.

The other type of multiplicity that new common laws have to confront is that of patriarchies. The problems and limits of existing religious, customary and legal pluralism in confronting patriarchies have been amply discussed. What are their implications in terms of a feminist legal project?

If common laws are to be based on an understanding of multiple patriarchies, then I would suggest a dual principle on which they could be formulated. The first is a principle of access to inalienable rights that are the same for all women and have the same horizon. That is, a refusal to translate multiple patriarchies into differential rights. The second is differing particularist legislations responding to diverse patriarchal arrangements, all of which would neither apply to nor be needed by all women. That is, a legal particularism that deals with diverse patriarchal arrangements, oppressions and inequalities, but does not set out to preserve them. And these particularist provisions – at once protective, corrective, and forms of redress – could take into account all sites of oppression, the customary and caste-based domain, extra-jural arbitrations, family and workplace, etc. That is, the sites of particularism would be based on types of social disparity and the specific needs and situations they engender,[141] while the concept of 'protection' would also need redefinition. These laws would function through a context sensitive jurisprudence.[142] We need a contextualised particularism that is freed from the patriarchal and punitive aspects of customary arbitration. Or, to put it another way, a type of legal particularism that empowers women to challenge patriarchies in different ways: that is, not a legal system that either maintains patriarchal diversity or presents a choice between patriarchies, but one that presents choices between forms of challenging them and between different sets of protections or corrections demanded in different contexts.

Taken together this would be a principle of similarity of enablement and diversity of protections. This principle in turn rest on two contradictions that I will explain: custom versus law, and citizens/agents versus victims.

The issue of custom versus law arises for women across denominations. The beneficent aspect of customs requires not necessarily that better customs determine new laws, but that the laws should embody the furthermost freedoms and rights that have so far been imagined by customs. Legal change could be envisaged in such a way that women do not lose what they have but only gain what they do not have. However, since one of the overlaps in patriarchal practices is produced through infringement of laws or not allowing women recourse to the law, women have to also be provided with specific recourse against customs, both as 'prohibition' and by creating legal adjudicatory space for women to protest these.[143] Different patriarchal arrangements suggest that different women need different types of protection even to enable them to claim their rights. A major implication of multiple yet overlapping patriarchies for new laws is that all patriarchies must be resisted while at the same time protection for women from specific existing patriarchal practices is sought. Such a two pronged legal pluralism cannot be based on existing religious distinctions as expressed in personal laws but on a countrywide evaluation of statutory and customary jural practices as they are practised in specific contexts, in relation to specific patriarchal arrangements as well as in relation to the way in which present laws reinforce or are shaped by customary prejudices.[144]

The second major contradiction that already exists in the Constitution, in laws, and even in feminist reforms, arises from their double purpose: to protect women, here and now, from existing patriarchies which subject women to determinate forms of economic and wider social dependence, thereby working within the existing familial and traditional definitions, including the definitions of public and private; while they also seek to project, simultaneously, an ideal horizon of women empowered as agents and citizens in order to change normativities as embodied in the law and in social life.

Protection has an abysmal and ideological history. The protections, obligations and entitlements written into pre-capitalist laws relied on forms of social consensus and were fully entwined with patriarchal arrangements. The same laws simultaneously enforced specific patriarchal arrangements and then tried to mitigate or delimit them or to build in partial protections from them for women through obligation, entitlement, etc. Present laws, including the personal, are problematic in part because they carry this structure of patriarchal enforcement, entitlement and male obligation in piecemeal fashion (that is, rely on older consensual patriarchies) in an uneasy combination with limited rights for women that have only partially displaced it.[145] Further, protection has historically been entangled with denial or deferral of rights. The systems of protection and entitlement came not only from brahminical, Islamic and other precapitalist Indian laws but also from nineteenth century English law.[146] Even now the state extends its protection in lieu of awarding rights, and courts persist in employing a notion of protection that rests on an essentialist and naturalising definition of gender diffference.[147]

We could break away from this confusion between victims and agents, and turn the contradiction into a legal principle. Through inalienable, irrevokable rights women could be defined as agents and citizens and not in relation to men. To the extent that women already have and can further acquire a social agency, they need maximally enabling laws as citizens with the capacity to redefine their lives. New legislation must carry broad rights regardless of marital status. At the same time, and for the time being, to the extent that women are vulnerable to oppression they need protective laws – but no longer based on ideologies of protection. And it is in the area of protective legislation, that choices and options can help to deal with differences in class and occupation, between different types and sites of labour, between propertied and non-propertied women, enhancing their capacity as wage earners, as opponents of patriarchies, and as individuals with the capacity for choice. Legal options then would be based precisely on those various factors that make patriarchies different from each other. That is, treating difference not as something to be added but omnipresent from the very beginning in any attempt to grasp the dialectics of social change and aspects of social organisation that govern gender relations. The principles, terms and parameters of choices and options for protection, recourse and redress, which can assist propertyless and economically disadvantaged women, have of course to be carefully thought out, keeping in mind desired social changes within a broad egalitarian framework.

A horizon of inalienable rights would stretch the tension between class or patriarchal interests and egalitarian premises of law. Class and/or patriarchal interests become doubly exploitative if rights are uncertain or inadequate. Particularism would be the way towards substantive equality,[148] its precise contents, as well as its modalities in terms of protection, correction and affirmation need to be debated. These would contextually take into account all the de facto sites of patriarchies including customary and religious, as well as be the space where new and emerging forms of patriarchies can be tackled. For instance while rights in workplace, in property, marriage, in family, in residence, would be universal, the de facto differences arising from the different needs of propertied and non-propertied women could be particularised. We will need to build a progressive and readily available tradition out of case laws. Case law contextualises, can reflect different intepretations of the same law, and carries the potential of constantly particularising the abstraction of law through feminist pressure.

If left, democratic and feminist organisations come together they could work towards such thoroughgoing legal change. The several independent initiatives being taken at present may then take a common direction and jointly excercise a veto rather than accept watered down laws.[149] Simultaneous attempts to alter social relations would make legal changes meaningful and efficacious since law is a horizon and a site of struggle but has limits as an instrument of change. Otherwise it can freeze or alter social relations in undesired ways.

(Concluded)

Notes

111 For instance, Medatithi incorporated the sudra into some of the prescriptions which in the Manusmriti were restricted to members of the first three varnas (Kumkum Roy, Defining the Household: Some Aspects of Prescription and Practice in Early India', *Social Scientist*, 248-49 (Jan-Feb 1994, p 11).

112 On the latter point see Goody, p 474

113 Sudra men and women were to serve higher castes and the Manusmriti tried to make it as difficult for them to withdraw their labour as for upper caste women; the Smritis enjoined a caste-based, dharma-ordained duty for all in order to maintain a specific regime of labour.

114 For instance, *both* enforced celibacy and enforced secondary marriage can be oppressive for widows depending on the total structure and how much choice women themselves have. Madhu Kishwar points out that Ho tribal women have freedom of choice to marry and remarry but none in matters related to land and labour ('Toiling without Rights: Ho Women of Singhbhum', *EPW*, 22:3-5 (January 1987). For a contemporary instance of structural, interlocking relations between lower and upper caste patriarchal arrangements see Jayoti Gupta, 'Himalayan Polyandry: Bondage among Women in Jaunsar Bawar' in *Chains of Servitude*, Utsa Patnaik and Manjari Dingwaney (eds) (Delhi: Sangam 1985).

115 On this last point see Esposito, pp 5 15, 39.

116 The Hanbali school gave the woman the ability to add provisions to the marriage contract which could safeguard her from polygamy, grant her rights of divorce, give her greater freedom of movement and so on (Esposito, pp 23-24)

117 The stipulation of mahr made women contracting parties instead of sale objects and was intended to place a limit on unilatera divorce; however, husbands had the dominant position in the contract Talaq is easier under Sunni law, Shia law is strict and limits the husband's power, N J Coulson *A History of Islamic Law* (Edinburgh Edinburgh University Press, 1964), pp 14 15, 111-12.

118 Coulson, p 110.

119 Among some lower castes a unilatera divorce unmediated by caste tribunal o panchayat was possible; further, the difficulty of proving customary divorce often arose in relation to bigamy (Derrett *Religion, Law*, pp 357-58)

120 Access to women came in severa combinations: a number of formal and lega marriages with religio-scriptural and/o customary sanction (the legitimation o polygamy in the dharmashashtras partly rested on the notion of women as property possessions); a combination of lega marriage with informal or less legal secondary marriages such as karewa, chada chadahna, that is, marriages that were recognised but had an inferior legality; a combination of marriage with access to other women – servants, concubines, low caste-class women – either in semi institutionalised ways or simply by dint o male social power

121 In Sunni law a man's marriage with a idolatress or fire-worshipper is considered irregular but not void, terminable at will by either party and does not create mutua rights of inheritance (Bhattacharji, p 130) In classical Islamic law children of mos such unions were considered legitimate and

had a right to inheritance (Esposito, p 19). Some Shia sects permitted mutah; this was temporary, there was no limit to the number of women, no right for maintenance for women and no corresponding duty of obedience, no mutual inheritance, while the contract could be terminated by either party whether mutually or unilaterally (Coulson, pp 110-11).

22 For this reason the dharmashastras were paranoid about caste mixture, especially about women marrying below. In Sunni law the only valid marriage women could contract was with Muslims even though men could contract a valid marriage with a Christian or Jew. The explanation offered is that there would be a likelihood of the wife being converted to her husband's faith but there could be no apprehension of the husband adopting the faith of his Christian or Jewish wife (Bhattacharji, p 131).

23 See Prusher pp 55-9.

24 Sangari, "Differentiating between 'Muslim' and 'Hindu'"

25 Local institutions of non-formal arbitration and methods for enforcing customary law were often on similar lines and at times the same for groups from both religions.

26 See for example H G Keene, 'Islam in India', *Calcutta Review*, LXXI (1880), pp 250-51; and the 1872 Census for this region "Indeed, except for rules of inheritance, in her occupation and mode of life the Mohammedan female does not differ much from the Hindu, although among Mohammedans marriage takes place at a little more advanced age, but the proportion in the age of the wife and husband is not materially different" (pp 44-45).

27 Sangari, 'The Amenities', and "Differentiating between 'Hindu' and 'Muslim' women". The persistence of some aspects of this model is documented for contemporary Meerut by Huma Ahmed-Ghosh, 'Preserving Identity: A Case Study of Palatpur' in *Forging Identities*, pp 176-77.

28 Sangari, "Differentiating between 'Hindu' and 'Muslim' ".

29 Agarwal, A39, 52

30 The Women's Indian Association enumerated lack of choice of partner, rule of parents and husbands, polygamy, unilateral divorce, seclusion and purdah as common problems Lateef, *Muslim Women*, pp 84, 88-89.

31 Lateef in *Forging Identities*, pp 49-53; *Muslim Women*, pp 58, 67, 112-13, 121-34, 148, 159, 165, 182-86.

32 Elizabeth A Mann, 'Education, Money and Role of Women in Maintaning Minority Identity' in *Forging Identities* pp 152-55

33 Imtiaz Ahmad has pointed out that Muslims cannot be studied through Islamic injunctions, since doing so underplays cultural intermingling between religious groups; while women have to be seen in relation to neighbouring communities with similar beliefs or practices, but not just Islamic practices (cited in Lateef, *Muslim Women*, pp 182-84). It is in the light of this that the full significance of the rhetoric of the judgments in the cases of Narasu Appa Mali and Saraswathi Ammal can be understood; the Bombay and Madras High Courts respectively held that Hindus and Muslims can be treated as different 'classes' for the purpose of legislation on matters of personal laws, not only because they follow different religions but also on historical facts of their different social and cultural backgrounds! (Prasher, p 214; Kannabhiran p 1510)

134 For a fuller discussion of the ideologies of sacramental marriage see Sangari, 'The Amenities', pp 31-35

135 A recent letter denies that Hindu marriage has been contractualised – the author claims that it is still a sacrament because it can be solemnised according to customary rites, the completion of which makes marriage complete and binding; though it requires the consent of both parties there is no contract, nor does the law require stipulation of conditions between the two parties for marriage (T U Mehta, 'Hindu Code', *The Times of India*, August 25, 1995).

136 In the perception of 19th century Deobandi reformers, the discrepancy between women's lives and legal position came from their adherence to 'false custom' (Gail Minault, 'Sayyid Mumtaz Ali and Tahzib Un-Niswan: Women's Rights in Islam and Women's Journalism in Urdu' in *Religious Controversy in British India: Dialogues in South Asian Languages* ed Kenneth Jones New York: State Univ of New York, 1992, pp 184-86). Though customary similarities were perceived as eroding Muslim women's rights in the early 20th century, abolishing them did not in practice restore these rights (Lateef, *Muslim Women* pp 63, 69,165).

137 They can depend on the family, on producing sons, on women's labour input even when it is invisibilised. Sangari, 'The Amenities'

138 Sangari, 'The Amenities'.

139 In this context it is worth noting the remarkable failure of anti-foundational postmodernisms, to produce creative relational analyses outside marxist frameworks, after having dismantled the 'master-narratives' of marxism They have largely produced an additive politics of multiple identities in which each type of oppression requires its *own* politics, and all of these together add up by a simple arithmatic to a plural politics. This amounts to saying that no form of analysis can ever account for more than one type of oppression at a time, let alone discover any relationships or structured connections between them.

140 For instance, SP Sathe mentions a draft of marriage laws that accommodates diversities of the personal laws regarding prohibited degrees of relationships to enable Hindus and Muslims to follow their own customs, as well as allows for the freedom of religious rites for everyone ('Uniform Civil Code', p 2166). In my view neither needs to be subject to legislation at all. Common laws can accommodate such non-patriarchal forms of diversity through being minimalist, that is laws that are neither prescriptive nor prohibitive of detail. If types of consanguinous marriage (such as cross-cousin) were neither prescribed nor prohibited, and marriage was simply to be between consenting adults, then people could follow their own preferences and diverse practices. The same principle could apply to religious rites, as long as marriages are registered, any type of marriage ceremony can (and in fact already does) co-exist with it.

141 It is important to state this since women have become a favoured site of postmodernist plurality

142 For a suggestive argument on the decontextualisation that inheres in all written laws and their difficulty in coping with aspects of social life that need to be treated contextually or are replete with concurrent ambiguities see Goody, pp 410-12

143 One such protection could be to make it a legal offence to prevent a woman from seeking legal recourse from customary patriarchal arrangements. Till now there has been a reluctance on the part of courts to declare a custom void if its unjust to women (Prasher, p 207), or to interfere in a panchayat's jurisdiction (Derrett, *Religion*, p 363).

144 For instance, women's lack of inalienable legal rights to residence in the Hindu personal law – which are contingent on divorce, widowhood, remaining single – can build a pressure on women to marry, to not divorce, and a de facto dependence on brothers that involves foregoing property rights. Similarly the denial of a share in the coparcenary is a legal ratification of the customary definition of women as 'outsiders' ejected from one family on marriage and never fully incorporated into the other

145 The Hindu Maintenance and Adoption Act has this double structure

146 The ideology of protection in 19th century English law classified for example, married women as non-subjects, people unable to determine and act on their own interests, hence incapable of binding themselves by contract and either worked to subsume their interests with those of father and husband or regarded them as identical with those of father and husband The state extended its protection in lieu of awarding rights (Mary Poovey, *Uneven Developments: The Ideological Work of Gender in Mid-Victorian England*, (Chicago University of Chicago Press, 1988, pp 75, 223)

147 For a critique of this see Kapur and Cossman, 'On Women, Equality'

148 For a suggestive discussion of a substantive model of equality combined with formal equality for women see Kapur and Cossman, 'On Women, Equality'

149 New legislation will have to be thought of alongside forms of legal implementation and institutions of implementation, since it is these which make for the totality of practices within the legal arena To complicate matters the state itself functions through a multiplicity of jurisdictions – Supreme Court, high court, district civil and criminal court, family court local arbitration such as panchayat, police – all of which affect legal definition in practice The legal arena as a whole needs to be monitored and made to provide more space for democratic interventions

Capitalist Agriculture and Freedom of Labour

Manjit Singh

S S JODHKA's article, 'Agrarian Changes and Attached Labour: Emerging Patterns in Haryana Agriculture' (*EPW*, September 24, 1994), and rejoinder to Jodhka by Tom Brass, 'Unfree Labour and Agrarian Change: A Different View', (*EPW*, April 1, 1995) throw up interesting issues regarding the capitalist penetration of agriculture in the green revolution belt of north-west India. The contention between them is not as much on substantive issues as on the theoretical implications derived out of them. Jodhka (1994) tries to explain, on the basis of his field study in Haryana, that commercialisation of agriculture has unleashed new productive forces which has corresponding effect on the relations of production. The traditional ideology of patronage, argues Jodhka (1994), has been eroded alongwith the 'bindings' of labour to particular employer. The overall captalist development has qualitatively transformed the social relations between the 'landlord' and the labourer. The progressive casualisation of labour has taken place at the cost of attached labour and a new balance of class forces has been established in rural Haryana.

The problem between Jodhka (1994) and Brass (1995) arises, for instance, on the interpretation of the nature of 'attachment' of attached labour. While Jodhka (1994) emphasises the 'freedom' of attachment (in spite of the economic compulsions of labour) through 'labour mortgage system', Brass (1995) insists on any form of conditional debt binding (whether for attached or casual labour) as an instance of 'deproletarianisation'. The contending arguments, at the face of it, seem innocuous. However, as both of them are commenting upon the agrarian political economy from the Marxist perspective, the above arguments may have serious repercussions on theory if not put to their appropriate place. In the following pages attempt has been made to situate the above discussion in the broader context of the debate in India and point out its methodological as also theoretical implications. To begin with, methodological issues.

The Abstract and the Concrete: Methodological Implications

In most of the studies on the political economy of Indian Agriculture, whether it was a debate on the character of mode of production or the question of primacy between the relations of production and forces of production or the contention over the distinction between the forms of appropriation and the relations of production, the most common methodological error has been to implant correspondence between the abstract understanding of the spirit of capitalist production with its concrete movements in space and time. The abstract logic is not a blueprint for tracing the concrete movements of capitalist growth; both have their mutual relative autonomy and correspond only under definite historical conditions. Nevertheless, both are important for our understanding of the real logic of capitalist development, whether in agriculture, industry or services. The abstract logic or a theory of capitalist development unfolds that part of reality which is inaccessible to our immediate sense data. While the abstract becomes the standard to look for identity and differences within the empirical situation, abstract itself is not immune to the empirical evidences. Most of our confusion in the debate arises when the abstract logic is either given a privileged position – a spectacle for our perception as also a standard of measuring objective reality – or is made amenable to piecemeal counter empirical evidences. This type of epistemology is fraught with the dangers of fundamentalism and authoritarianism on the one hand, and empiricist incoherence on the other: authoritarianism, as it is received as a matter of faith, immune to any critical scrutiny, and empiricist incoherence, because it impairs the relative autonomy of theory. It is true that abstract logic of understanding is more encompassing and also relatively stable which make our inter-subjective understanding possible, yet the twin limitations of theory cannot be ignored: one, *a* theory is not *the* theory, it is only one out of the multiple competing theories which might be equally, if not more, effective to the understanding of empirical reality; second, too many contrary evidences from the 'field' may discredit a theory itself. In the background of this methodological caution on the dialectical relation between theory and objective reality, before coming down to the substantive issues of the debate, I would like to comment on the abstract characterisation of capital and its concrete movements in history. Here, once again, we have to take recourse to the problem of method.

First of all, the abstract understanding of capital and capitalist development, which was supposed to give us more convincing insights to the growth of industry in history, has been found at variance with the actual fact of history, both in terms of the structure of production and the nature of social relations of production.[1] Therefore, formulations, such as, capital as antithesis of free wage labour[2] and progressive concentration of capital, through its continuous higher organic composition, as a cause of self-destruction, could not prove to be final dictum, derived from the paradigm of unitary evolution. When the same parameters of Marxist political economy of capitalism are applied to the more natural space of development, that is, to the understanding of European and American agriculture, the limitations of the model become further obvious.[3] It is really difficult to say with certainty about the efficacy of the theory of capital development when applied to the Indian agrarian structure which is build upon a unique intermesh of caste and class relations.[4] The particularity of the socio-economic formation such as that of India, therefore, instead of being instantiated as a case of misfit, could better be incorporated into the theoretical model itself to give it more dynamism.

Within agriculture, the essential difference between pre-capitalist and capitalist agriculture is not simply of presence or absence of extra-economic coercion in the relations of production. The more crucial difference is the very logic of production, that is, whether use-value is of primary significance to the reproduction of social configurations or exchange value. At a given point of time only one value would predominate, indicating to the corresponding 'mode of production' in a given social formation. The logic of reproduction of particular predominant value in a social system is not simply economic, it encompasses the complex whole, interwoven both by material and non-material (institutions, culture, ideology, etc) aspects of human existence. This is precisely the reason that the predominant thrust of a system can be neither proved nor disproved on the basis of the correspondence, or the lack of it, to some of the aspects of empirical reality which are otherwise central to the theory. The unstable or 'contradictory' nature of the partial empirical evidences (or counter evidences) does not effect the endurance of the dominant thrust of the corresponding mode. In other words, abstract understanding is relatively autonomous and thus, to that extent, immune to contrary empirical evidences. If that is so, how can the prevalence

of debt dependency and attached labour prompt Bhaduri (1984:115) to tell us that the agriculture of Haryana is in the grip of 'semi-feudalist' ghost. The other participants, such as Bardhan (1984) and Rudra (1987) rightly refute the semi-feudal claim of Bhaduri (1984) to prove that the nature of contemporary indebtedness and dependencies is different than that of the pre-capitalist agriculture.[7] However, their own plank of argument leading them to the contrary conclusions is not different from Bhaduri. That is, they share the same mode of argument in order to give a counter swing to their conclusions. Such contrary claims about the same objective reality, at times, leave serious doubts about the authenticity of such studies and their findings. However, the real flaw is in method, and not in the objective reality, which led the above authors to contradictory conclusions. This is a tendency towards, what Bhattacharya calls, 'empiricising theory'.

Engaging Attached Labour: 'Deproletarianisation' or 'Labour Mortgage System'

The arguments on attached labour in Haryana between Jodhka (1994) and Brass (1995) are more original, and hence more interesting. Both of them agree on the elements of dependency and unfreedom involved in the relation of attached labour. However, Jodhka (1994) does not agree with Brass (1995) on his claim of 'deproletarianisation'[8] in the otherwise capitalist agriculture of Haryana. For Brass (1995), "in Haryana, unfreedom encompasses permanent, casual, and migrant labourers". It hampers the commodification of labour power which, in turn, has bearings upon the emergence of the proletarian class consciousness, a source of spark for flaring up class struggle. This line of argument raises several important questions which are crucial to the characterisation of capital itself. However, I would concentrate more on the question of freedom of labour.

(1) Can capital survive and thrive on unfree labour? It depends on how unfreedom is defined. There is a qualitative difference of unfreedom between the pre-capitalist and capitalist social formation. If indebtedness of the producers is automatically indicative of the level of unfreedom, in that case, whether industrial workers or, for that matter, even nation states, have very limited freedom. In fact, capital involves control, planning, and projections which is threatened not as much from the 'inorganic' part of capital as from the organic one, that is, sellers of labour power. The compliance or co-operation from workers is secured by various means; whether economic or extra-economic depends upon the nature of the labour process and the product involved. Many of the brick kiln workers are recruited as bonded labour, not only to make super-profits out of them but also to secure an assured supply of labour at critical moments of the labour process. However, there is difference of such unfreedom: it is not juridical, social or political, it is 'voluntary' under economic compulsions. The unfreedom of the pre-capitalist social formation involved multiple aspects of social existence and not a sheer economic contract.

(2) Do we wish to equate freedom of labour with the functioning of 'rational' labour market? If that is so, how to solve the problem of a stable supply of workforce, undisturbed by the 'rational' choice of the workers. The labour market rationality actually functions under a different sort of freedom which overlooks the immediate economic gains and places the long-term sustenance at the centre of any decision. The fear of unemployment, and that of earning ill-will by becoming foot-loose are two important factors which mediate any rational choice of the worker. This shows that, under capitalism, freedom of workers is subject to all those constraints they face due to their subordinate position in the social relations of production. This delimitation of simple economic rationality is instrumental to the regular supply of labour force. On the other side of the 'fence', though to a lesser extent, the similar sort of 'moral' qualms of constrained rationality is also followed by capital which lend hope and trust to the workers. There are some of the constraints on either side which practically allows but only a limited use of juridical freedom in 'rational' choice.

(3) Capital thrives not as much on freedom as on constraints. In fact, absolute freedom in the movement of capital as well as labour would bring demise of the very social relations on which they stand. Whether labour power or its tangible products, they circulate within the circuits of expanded reproduction only under the cautiously guarded freedom.

(4) To claim that material conditions of production determines historical self-consciousness of the subject is a too narrow, mechanical, and naive understanding of change in much complex social systems.

(5) It would be a mistake to discount the role of active subject in the constitution of social relations of production whose nature, in the last analysis, is expressed at the interface of competing agencies for a better share of the common space of power – economic, cultural or political.

(6) The expanded reproduction of capital is sustained on various forms of inequalities. These inequalities are not only economic, not even simply in the form of hegemony, they are more pervasive and all encapsulating. The dominant ethos of competition and achievement mediate inequalities and transform them into a battlefield for 'domination' – the 'domination' which is already dominated either by the same elements against which battle is being waged or by the general weight of the battlefield (social system) which defies boundaries. All pervasive inequalities and an incessant 'war' to transcend them becomes a potential source of general loss of freedom which is qualitatively different than what has been propounded by Brass (1995). Broadly, the sites of inequalities can be located between capital and wage labour on the one hand, and intra-capital and intra-labour on the other.

In the light of aforementioned discussion on the nature and limitations of freedom under capitalist production, it seems difficult to maintain the idea that the binding of the workers through loans is a case of 'deproletarianisation'. The 'voluntary' binding through debt is a means to exploitation whereby the labourer is prepared to sell his labour power at below its average social value. Over-exploitation of labour through debt-binding does not amount to the change in the character of fundamental relations of production, that is, to deproletarianisation. Also, distinction has to be made between the two types of freedom, one which binds a labourer to the employer and the other which binds him to the social class or an institution. The former can be deemed as bondage, and the latter as attachment. Bondage is unfreedom, attachment is social expression of unequal relation between capital and labour. When Jodhka (1994) talks of freedom, it is in the latter sense which is qualitatively different from the former. The former type of bondage to individual employer has come down drastically in Haryana, as Brass (1995) himself pointed out, due to the general awareness about its illegal status. However, to call 'attachment' as 'unfree relation' and to make its abolition a pre-condition for proletarianisation, is to ask for the abolition of capitalism itself.

Most of the findings of Jodhka (1994) affirm my own conclusions from the study of agrarian structure of Punjab, carried out at two points of time, that is, during the 1980-81 and 1990-91. For instance, his findings, such as, labour's disliking for attachment, erosion of ideology of patronage, and access to alternative means of earning all together broaden the role of market in labour power transactions in the rural areas, corroborate my findings. Similarly to characterise attached labour, under the current agrarian conditions of Haryana, as labour mortgage system is highly insightful and innovative interpretation of the social relations under study. However, these insights perhaps can still be better grounded within his own logic of social reproduction of agrarian society.

More than their love for freedom, a very simple economic calculations of an attached labourer shows him that working as casual labourer is more paying than attached labourer. With the take over of green revolution, the changes which ensued are not simply in terms of new biological, chemical and technological inputs, the very cropping pattern has undergone drastic changes, effecting radically the traditional relations of production. For instance, the most significant changes have occurred in the casualisation of agricultural labour, and a shift from time rate wages to contract/piece rate wage payment. This is also partly a marriage of convenience between the employer and the labourer. By giving work on contract the employer saves supervisory cost and also the hassle to provide cooked food to the labourers. In economic terms the employer, by unleashing competition among the labourers, can suppress wages to even below their subsistence needs. On the other hand labourer, by taking contract of a given agricultural operation, can engage whole of his family, and also can work at his own convenience (what he extols as freedom), free of interferences from the employer.

The commercialisation of agriculture has condensed the working period to a few peak periods of major agricultural operations. Consequently, a tough competition is unleashed on either side during these peak periods of labour demand. While the employers compete among themselves to grab as many labourers as possible the labourers compete to get work and finish it off as quickly as possible before the operation is completed all over. By working on peak periods, with the help of his family members, the labourer saves a lot of his time which he can invest into alternative employment opportunities. From freedom if Jodhka (1994) means the kind of one discussed above, it is certainly there. Such freedom entails for the casual labourer also more family earnings than that of an attached labourer. My own calculations show that a casual labourer, by working for six months in agriculture (inclusive of intermittent help from family members) and the remaining six months in allied or non-agricultural occupations, earns far more than an attached labourer who works like a bull throughout the year. In this sense the relative freedom of casual labour is multifaceted – political, social and economic.

Another small technical point: is it labour which is mortgaged by the hapless labourer to the employer for loan or is it labour power? To me it seems that the labourer who offers for attachment is mortgaging labour power (capacity to produce), and not labour.

The *sajhi/siri* system of labour extraction, though already rescinded to the dunghill of history, also could have been explored a little more deeper, especially its ambiguous position in the social relations of production. *Sajhi* system (literally co-sharing) was not simply one of the forms of attached labour, as explained by Jodhka (1994). Some of the differences between *sajhi* and attached form of labour can be, such as: (a) *Sajhi* would be bound to employer while attached labourer is bound to formal contract which he can legally break by paying back the loan taken against the promise for work; (b) The payment to *sajhi* was made out of the share of the crop for which he laboured throughout the year, while wage of attached labourer is detached from the harvest of the crop; (c) The status of *sajhi*, in the social relations of production, can be fixed somewhere in between the sharecropper and attached labourer. Like sharecropper he shared with the employer both boon and bane of the harvest. His contract was of raising the crop on a given piece of land, irrespective of the amount of time involved. Unlike sharecropper, and like attached labourer, he was paid for the amount of labour power he engaged, in contrast to the sharecropper who shared produce with the landlord in lieu of land rent. *Sajhi* arrangement was a very smart way of extracting maximum surplus with minimum payment. Since the fate of the *sajhi* was tied to the yield of the crops produced harvested, there was in-built incentive to harder work.

In my villages under study from Punjab the last three *sajhis* vanished from the scene by mid-1980s. Why? The main logic is economic. During the pre-green revolution period agricultural growth was imperceptible. Cropping pattern, and the corresponding level of use of labour and non-labour inputs, was also relatively stable. In that situation it was much easier for the employer to calculate beforehand the amount of harvest being parted in the form of a definite share of the crops. *Sajhi* was engaged for cultivating a piece of land which was just enough for a pair of bullocks. That is why he was called as *hali* (ploughman). When animate source of power (bullocks) got replaced with inanimate power source (tractor, owned or rented), the organic link between the bullocks and the *sajhi* was ruptured and penetrated by the commercial calculations. The shift in agriculture from the 'way of life' to profit making industry rung the death knell of *sajhi* system of cult. ation The comparison between the net earnings of *sajhi* and the attached labourer showed that the former costed to the employer nearly 50 per cent more than the latter and thus *sajhi* was out. Another important reason for the elimination of *sajhi* seems the fear of losing land to him under the new land reform laws whereby a cultivator, after a few years of continuous cultivation of the same piece of land, can claim to the permanent right in that land. Therefore, more than the preference of the *sajhi* to work as attached labourer, as claimed by Jodhka (1994), the reluctance of the employer to engage *sajhi* anymore seems more plausible explanation.

Notes

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1 For instance, the British lace industry of the early 19th century not only engaged children of age as low as three years, the labour force was also not free from various types of compulsions. Similarly, the vast industrial empires in Japan have been built on the extensive use of unfree female labour in the past.

2 Free in double sense: free from the possession of any means of production except labour power, and free to sell labour power at competitive market price.

3 The use of slave labour by the American planters during the early 19th century, to produce cotton and tobacco for the world market is one such instance where the prevalent relations of production seem to be a case of misfit within the given mode of production. The similar situation is found in the Indian tea plantations, during the same period of early 19th century, where the use of captive labour was rampant. Another anomaly in the relation between theory and agricultural production is to consider agrarian capital as fully competitive with industrial (manufacturing) capital and to expect that agrarian capital would undergo similar processes of capital concentration and depeasantisation.

4 That is why the concept of Asiatic mode of production had to be introduced in order to take into account the peculiarity of the Indian social relations of production.

5 In fact, the similar logic could be extended further to the Indian economy as a whole whose dependence for conditional loans upon the World Bank and IMF does not epitomise her relation with these financial agencies as 'semi-feudal'. Such dependencies are common even among the industrial workers who borrow loans from their employers to meet their contingent social, cultural and economic needs.

6 "...deproletarianisation refers to a process of workforce restructuring that involves introducing or reintroducing unfree relations, either by replacing free workers with unfree equivalents or by converting the former into the latter" [Brass 1995:697].

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- Withdrawal allowed anytime after three years at NAV based repurchase price
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- Income from this plan enjoys tax benefit up to Rs 13,000/- under overall limit of section 80 L.
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